# American Artisan The Warm Air Heating And Sheet Metal Journal And Sheet Metal Sheet Metal Journal And Sheet Metal Sheet Met

Vol. 98, No. 22

CHICAGO, NOVEMBER 30, 1929

\$2.00 Per Year

## Announcing THE NEW

## ROBERSON FOR CALLER

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The Fan for the Large Jobs

THIS fan handles approximately 3000 cubic feet of air per minute. It does not require the building of special boots for cold air returns. It has a new type of distributor which does not require tubes. Where distributor tubes are desired it is furnished with a 24-inch distributor skirt to which tubes as large as eight inches in diameter can be attached.

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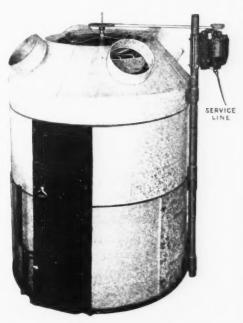
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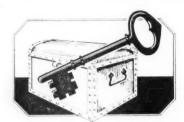
TWO SPEED MOTOR

ASK YOUR JOBBER FOR COMPLETE INFORMATION AND PRICES

The A. H. ROBINSON COMPANY Massillon, Ohio



#### THE PREMIER DEALERS' ALLIANCE "



"the Key to Greater Profits"

## Observe These 3 Essentials

To Have a Sound and Profitable Retail Furnace Business

FIRST and most important, you must be a live-wire—a wide-awake, progressive business man.

Today nothing is constant in business except change. If you are progressive, as you must be, then you are constantly on the lookout for new methods, new ways to meet the ever increasing tide of Chain Store and Cut Price Competition. The Dealer who is not progressive eventually wakes up some fine morning to find himself either wiped out or loaded up with the sort of jobs nobody wants.

SECONDLY, it is essential that you have the agency for a furnace that is the leader in its field.

In the quality field, Premier stands head and shoulders above the rest. "Constantly Improved—Supreme in Its Field" has ever been the slogan of Premier Engineers. And now—very soon—will come a new and greater Premier—the New 1930 Premier DeLuxe. Three years have been spent in studying how to make a fine furnace even finer. Above all the New Premier is a proven Premier. Under heavy firing, the 1930 Premier has broken all existing records for endurance and ability to withstand abuse. The New

Premier is not just somebody's idea, not a theoretical design to be tried out on the public—it is instead a Premier from the Proving Ground—a proven Premier.

THE THIRD and equally important essential is that you and your furnace be backed up with a complete and powerful marketing program.

Marketing is just another word for selling. No Dealer ever became rich "buying" fürnaces from the manufacturer. Selling them at a profit makes the money and Premier has always helped its dealers make that money. For 1930 Premier goes even further. For that purpose the Premier Dealers' Alliance has been worked out. Alliance means a union of interests. The Premier Dealers' Alliance is all that the name implies.

YOU will prosper in 1930 only to the extent that you follow these three essentials. If you already have the first essential, then you will be interested in what Premier has to offer you in the second and third. Good judgment dictates an immediate investigation.

#### PREMIER WARM AIR HEATER CO.

Dowagiae, Michigan





Will warm air heating have greater public acceptance next year?

What is the industry planning to do in 1930 to increase the sale of better warm air heating installations?

THERE are many important factors that bear on the answers to these and other vital questions concerning your business and articles giving first hand information on the entire subject of warm air heating are included in the contents of

AMERICAN ARTISAN

## 36th warm air furnace annual now in preparation

Learn the newest developments in Unit Design and Installation—

Learn what Oil and Gas are doing to help the warm air heating industry—

Study the Dealer Field Survey for opinions, experiences and forecast for 1930—

Absorb the practical Merchandising Methods found successful by other men—

You will have all this and much more at your finger tips when you open this big Annual issue on December 28th—

### Manufacturers and Jobbers---Reserve Space NOW

The value of this Annual to the trade is well known to the manufacturers and jobbers of Warm Air Furnaces, Warm Air Heating Accessories and Sheet Metals. Many have reserved their advertising space a year in advance—many others placed orders immediately following our first announcement. Tell us to reserve space for your announcement now—reach the livest buyers in the field with this outstanding medium.

#### AMERICAN ARTISAN-139 North Clark Street-Chicago, Illinois

## Your customers will want



whether they see it first or last because its famous

#### THREE-WAY AIR BLAST

patented construction insures them of

## **SMOKELESS**

operation and powerful economical heating



NOTICE this exclusive feature and realize what an advantage it is to be able to offer it to your customers.

Numerous tests and years of practical success prove that it greatly increases heating efficiency by providing a proper mixture of air which causes all smoke and gases to be turned into additional heat units.

MAKE more sales and more profitable sales by selling the better warm air heating idea. The Ath-A-Nor fits in with high quality installations not only because of its exclusive air blast construction but also because it possesses other distinctive features and high grade construction throughout. Get the Ath-A-Nor catalog now.

The May-Fiebeger line includes several styles and a complete range of sizes in both cast iron and steel furnaces. All high quality and reasonably priced.

The May-Fiebeger Company
NEWARK, OHIO

## Next week's issue

will contain the first and most complete report of the

NATIONAL WARM AIR HEATING ASSOCIATION'S

## Convention

TO BE HELD

DECEMBER 3rd AND 4th

AT

COLUMBUS, OHIO

Many interesting and important subjects are on the program —what takes place will be of vital interest to you—

Be sure to read this convention story in the December 7th issue of







#### Our New Self-Locking Double Stack

THIS new design is the result of over 25 years' resperience in making good Furnace Pipe. When the new Chicago stack is put together it is put to stay and it is extremely easy to erect. The more you know about good furnace pipe the more you will appreciate Chicago Pipe. Ask about this improved pipe today.

Write today for our Catalog No. 21, illustrating and describing Furnace Pipe and All Furnace Supplies.

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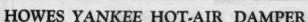
#### "GEM"

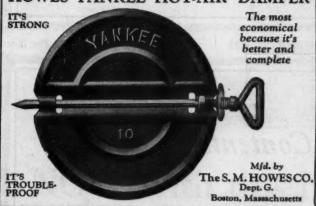
Adjustable

#### RADIATOR SHIELDS

A customer comes to you with his radiator measurements, takes home some "GEM" Adjustable Radiator Shields, slides them out to the right width. That's the ADJUSTABLE FEATURE. No special fitting necessary. Also saves atock-carrying space for you. Five handsome finishes—10 popular sizes adjustable to radiator top widths, 6" to 13"; lengths, 11" to 65". Retail at \$5.00 to \$10.00. Beh & Co., 1140 Broadway, New York, N. Y.

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It means more furnace jobs and pleased customers.

It sprays a fine moisture over the ashes and keeps dust from spreading. Saves grates, adds to furnace efficiency and is easily attached. The sleeve connection allows the nozzle to swing out of the way with door. High grade in all respects.

Write today for full details, circular and prices.

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IRON AND WOOD STOVE PATTE

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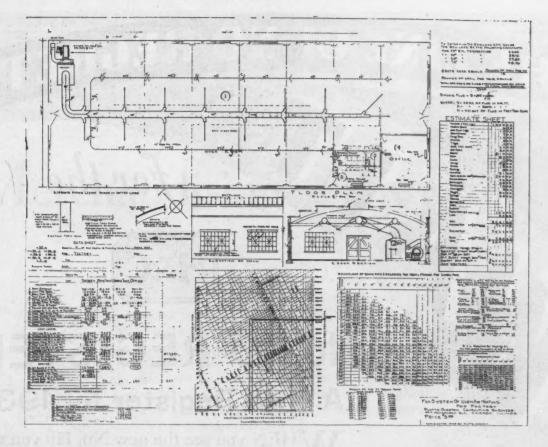
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## NOW with this help you can handle the BIG heating contracts

If you are a live progressive warm air heating and sheet metal contractor and if you have been passing up the Big Fan Blast Warm Air Heating jobs because you lacked the proper engineering information to tackle this type of job, this service is just what you have been waiting for.

This service, which consists of complete plans and engineering information, won't make you an engineer, but if you know how to read plans, charts, graphs, and tables and know how to figure grate areas, heat losses, pipe sizes, etc., when you are shown how with complete data and correct formula, you will realize the great value of this information and be able to use it profitably.

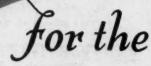
The plan illustrated above (greatly reduced in size) is that of a Fan Blast Warm Air Heating installation in a factory. All the information necessary for you to figure a similar installation for a larger or smaller factory is given right on the full size plan.

Plans, specifications, material and cost estimates, instruction sheets, description of system design, etc., showing installations in *Church*, *School*, *Theatre*, *Garage* and *Residence* are also available. Each plan is complete with charts, graphs, tables and heat loss data sheet. Methods for sizing ducts, mains and branches are given together with data for determining grate area, smoke lue area, fan and motor requirements.

#### ENGINEERING PLANS FAN BLAST Warm Air Heating AMERICAN ARTISAN and Ventilating 139 N. Clark St. Chicago, Ill THESE plans and accompanying data were prepared by a well known Fan Blast Warm Air Heating and Ventilating Engineer. Live contractors who can apply this information can use it to land the big jobs that come up in their community. The Schools, Churches, Factories, etc., in your town should be heated by Warm Air and these plans open the way for you to get the husiness. Send me more infor-mation and prices of PLANS for FAN BLAST WARM AIR HEATING AND way for you to get the business. Send the coupon for further information. **Book Department** AMERICAN ARTISAN 139 N. Clark Street Chicago, Ill.

Say you saw it in AMERICAN ARTISAN—Thank you!







## No.IIO REGISTER

#### A New Register for 1930

THEN you see the new No. 110 you will agree that it is far, far ahead of any register design you have ever seen before. It is a beautiful job; and of a class that more than meets the increasing call for a finer register for finer homes.

Mechanically, it has the best operating device we have ever seen applied to a register! And, naturally, it has, like all other H. & C. Registers, a free air capacity second to none.

You'll do well to see this new register, and get our 1930 prices, before you sign any register contracts.

Watch for the H. & C.—2-page Advertisement in the Special December issue of this magazine.

## HARTECOOL

Manufactured by HART & COOLEY MFG. CO.

CHICAGO, ILL. 61 West Kinzie Street NEW BRITAIN, CONN.

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ALSO: A COMPLETE LINE OF CAST AND WROUGHT GRILLES - New Catalog Now Ready







Vol. 98

CHICAGO, NOVEMBER 30, 1929

No. 22

## Merchandising Attractivness

IF YOU were to ask a real estate operator or a banker why there exists a differential in favor of steam or hot water on loans extended on dwelling house property, either of these worthy gentlemen would inform you that the dwelling with a steam heating system is preferred by the public. Hence, that dwelling is a quicker asset for no other reason than that public prejudice makes it so. Therefore, the making of the warm air heating system as attractive as possible is going to do a great deal to turn public prejudice in favor of warm air. Let's endeavor to do it.

HE warm air heating industry in casting about for some means of increasing the sale of its product has gone a long way in many

directions of improvement on that product. Not only has the quality and workmanship improved, but the general construction and appearance have changed completely for the better within the last few years. Ten years ago no one ever thought of introducing color into the basement.

BUT while extensive efforts have been directed toward the improvement and appearance of the furnace itself and that portion of the installation which is in the basement, there is a great deal of room for added improvement in the matter of attractiveness of register and grille designs.

If we are going in for appearance in our heating equipment, is there any portion of a furnace installation that is as conspicuously displayed as the registers? They are in every room of the house and open to view of anyone coming into that house.

IF WE are going to sell warm air heating units on the basis of appearance, would it not be to our interests to take advantage of every possible opportunity to make that

portion of the warm air heating system which is open to view as attractive as possible? There is no doubt that discriminating persons, especially women, are influenced to a very large extent in their purchases where attention to these seemingly unimportant details has been given. There are instances on record of dwellings running into six figures being bought for no other reason than that the architect or interior decorator had the business acumen to realize that a dwelling may often be made on the strength of the fact that a doorway had a certain curve or the dwelling had some other minor point of attractiveness.

THERE is no doubt that if more attractive registers could be provided, a great deal of the present prejudice against houses heated with warm air would be removed. If this were not true, and if appearance did not count so largely, then why would the steam and hot water people be making such a strenuous effort to hide the radiators of their systems? Their activity in this respect shows that they have taken the trouble to analyze their own products thor-

oughly and have discovered its weak points from a sales standpoint. They realize they cannot dispose of the radiators, so the next best thing they can

do is to endeavor to get them out of sight as much as possible. In other words, to make them as attractive as possible so as to catch the eye of the public.

HERE are many ways in which L the manufacturers of warm air registers could cooperate in making the warm air heating system an attractive as well as a useful article. And it is to be hoped that they will not neglect to endeavor to build registers in the future with an eye to the best possible appearance in their product. In so doing they will be rendering the warm air heating industry a distinct service. If we are going to be required to sell our products on the basis of appearance as well as utility, then let us not permit competitive industries to outdo us in this respect, especially when the system which we are marketing has the advantage in every other way.

IF FURNACE installers could only be brought to realize that to sell appearance and utility value rather than furnaces will bring them far more money, everybody would benefit from the industry.

## Radio Broadcast Brings Results for W. E. Born

Davenport, Iowa, Sheet Metal Contractor Finds "Window Shoppers' Hour" Good Time to Remind Home Owners to Have Furnace and Sheet Metal Repair Work Done-Cost Negligible

IN this article, consisting of an interview with W. E. Born, Davenport, Iowa, the reader is told of the experience which one contractor had with the radio broadcasthow the radio broadcasting was conducted, how much it had cost Mr. Born, and what results he obtained from it. A new product is also described which sheet metal men can handle.

THE fallacy that opportunity knocks but once has again been exploded. Poor in mental equipment indeed would be the person who could see but one opportunity in his whole lifetime. If in

reality such a person ever did exist, the chances are pretty strong that he would even miss that one opportunity.

Opportunity is constantly confronting man. Never a day goes by that does not contain its quota. And in recent years the frequency of their occurrence has been vastly accelerated.

There are men who do not see and grasp opportunity when it presents itself, and the sheet metal industry has an overabundance of such. But W. E. Born, sheet metal contractor at 728 West 2nd Street, Davenport, Iowa, is distinctly not one of these, however, for he is one contractor that is forever seizing and analyzing the new, adopting it if it holds possibilities for serving his purposes, dropping it again if not. He literally seizes opportunity by the forelock. He views everything concerning his business with an open mind. As a result his business is prospering while that of others

languishes for want of cultivation.

In order to show the manner in which Mr. Born approaches the new and at the same time perhaps stimulate others to adopt his extremely optimistic attitude toward his business, let us relate a few experiences that will reveal the man himself in action. Let his actions speak for themselves.

A short time ago he was approached on the proposition of advertising his business over the radio. Ordinarily a sheet metal contractor would dismiss the thought as impossible without even analyzing it. To most sheet metal men the idea would be preposterous, a waste of time and money, a brushing of it aside at first blush with an impatient gesture of unreasoned finality. But not Mr. Born. The idea suggested a possibility to him worthy of serious consideration. Here was a new thought, something for his agile mind to toy with. He listened intently to what the salesman had to say, asking such questions as would give him as

much of the story as possi-The salesman gone, Born mulled the thing over in his mind, considered the possibility of getting his name before the people of

the tri-cities, and finally giving his consent to "give it a whirl," as he himself later related the incident.

The actual broadcasting was done over WHBF, the Rock Island, Illinois, station, on what is designated as the "Window Shoppers' Hour"; that is, between 7 and 8 in the evening twice a week and the duration of the contract was for three months. In other words, the W. E. Born sheet metal contracting business was mentioned over the radio 20 times at a cost of approximately \$2.50 a time. First a selection of music was played, followed by the announcement given below:

"W. E. Born, sheet metal contractor, located at 728 West 2nd Street, Davenport, Iowa, is a specialist in mill and blow pipe work. He also does all kinds of tin and copper and sheet metal work, and can take care of gutter and spouting that needs repairing. Don't put off having your furnace looked after until too late. Now is the time to have the work done, and Mr. Born



Erecting Crew of W. E. Born Placing Ferro-lithic Sheets to Warehouse of Gessner Fuel & Material Co., Davenport, Iowa.

is the man to do it. Give him a call now and have him see what has to be done to your furnace. The phone number is Kenwood 2454, all estimates on work cheerfully given. If your furnace needs replacing, Mr. Born is agent for the International furnace, one of the best on the market today. He also uses the Rock Island 'No Streak' register and fittings in his installations. Give Mr. Born a call for any repairs in his line. His services will be of the best."

The time of the announcement was late summer and early fall when folks were naturally in the most receptive mood for a purpose of this kind.

"Experimental, you say? Yes, extremely so.

"Expensive? Well, hardly that in relation to the cost of other forms of advertising.

"Results?" Mr. Born lined up several sizable jobs that can be traced to no other source.

That is one result of the openmindedness with which Mr. Born approaches things new. Here's another, and this next instance shows how through his initiative he is developing the sheet metal industry even though it is to his own advantage.

The superintendent of a certain candy factory to which Mr. Born had been called to make some minor repairs complained of having difficulty in cooling their products. Sensing an opportunity here to be of service, Mr. Born analyzed the situation quietly and then approached the superintendent, suggesting the possibility of correcting the difficulty by substituting sheet metal for the troublous wooden structures. He outlined a complete plan. So convincingly did he present the proposition that the shop superintendent instructed him to proceed with the change. So successfully did the plan work and so completely did the existing trouble disappear that the superintendent consulted Mr. Born on other propositions that were preventing the plant from producing at a maximum efficiency. And Mr. Born is at the present time working on one of

these. The same tactics were applied in a flour mill.

Thus a little creative thinking and helpful suggestion on the part of the sheet metal contractor resulted in a job of no small magnitude for the contractor and a real service to the customer. And the best part of it all is that competition did not enter. That is real selling.

So much for that. Now let us show how Mr. Born displayed evidence of executive ability of an entirely different nature. And here let it be said that Mr. Born has opened the way to opportunity for aggressive sheet metal men in other cities.

A new product known commercially as Ferro-lithic roof decking was placed on the market by the Berger Manufacturing Company. Mr. Born received the contract to apply this material on the roof of a warehouse belonging to the Gessner Fuel & Material Co., 1801 Rockingham Road, Davenport. No sooner did the structural iron workers get wind of it than they claimed the work of laying this material. It

(Continued on Page 173)

# Projection Drawing in Pattern Drafting

By Adolf Kealer, Instructor Washburne Trade School

IN THIS problem the student will make a projection drawing of a tin bread pan, to the following specifications:

The bread pan is to be made of IX tin plate, ends and bottom double

seamed and a No. 14 gauge tinned wire all around the top edge. Allow double edges on the side patterns and single edges on the end patterns for double seams.

For double seaming the bottom, allow single edges at the bottom of the sides and ends and a double edge all around the pattern of the bottom. Three-sixteenths inch should be allowed for the wire edge

at the top of all the four sides. Care must be taken in cutting the notches as exact as possible, because the notching has a great deal to do with how well the pan appears after it is completed.

It is a good scheme to make oneself a marking gauge out of a piece of sheet metal as shown in Fig. 6. This gauge is made by cutting the dimensions of the notches on the corners of the gauge and using them to describe lines on the patterns.

For example, to notch the cor-

ners of the bottom pattern we can use the corner of the gauge marked ½ inch describe lines on the four corners of the bottom pattern and notch out the ¼ inch square that the gauge marked.

TIN BREAD PAN.

DOUBLE SEAMED BOTTON

A NO 14 GAUGE
THINKED WIRE

SEAMED ENDS

Illustrating Projection Drawing Principle

To notch the end pieces at the top we will need a gauge which will mark off 5/16 inch, that is, 3/16 inch for the wire edge and 2/16 inch for clearing the wire, which will make the gauge mark 5/16 inch.

This gauge mark should be used to describe a line parallel with the top edge, and for the side at the top of the end-piece we will use a gauge mark of 1/8 inch, equal to the single edge.

Where the 5/16 inch mark and the 1/8 inch mark meet, that is the

part that has to be notched out. In a similar manner one can make marking gauges for any size notches.

The important thing to observe, after the notching has been done, is

to see that the edges are turned in the proper direction. First set the folder to make 1/2 inch folds and make the single edges on the endpieces to an angle of 90 degrees, as shown in Fig. 5. The three edges can be folded at the same time and in the same direction.

With the same setting of the folder turn the double edges of the side pieces all the way over and use a piece of

metal to squeeze them up against so that there is just enough room for the single edge of the end-piece to slip in. Compare the edges of the side-pieces in Fig. 4 with the edges of the end-pieces in Fig. 5.

While the edges on the end-pieces are all folded outward, the edges for the corner seam on the side-pieces are folded inwardly as shown in Fig. 4.

Next fold the edges for the bottom on the side-pieces as shown; also fold the single edge around the

four sides of the bottom pattern. Now set the folder for a wire edge and change the adjustment gauge to make a 3/16 inch bend for the wire edges. It is well to try the setting at first on a piece of scrap tin and then make all the folds for the wire edge at the top-end of the four sides.

To assemble the pan, first double seam the ends to the sides, then double seam the

bottom, and lastly wire the top.

## RADIO BROADCAST (Concluded from Page 171)

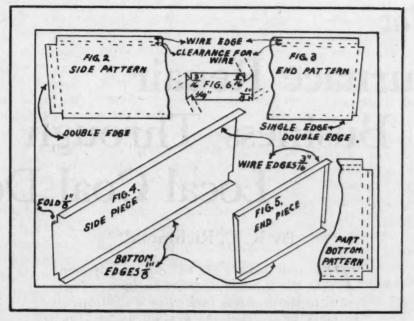
looked like a real fight between the sheet metal workers and the structural iron men. But Mr. Born was on the job ahead of the iron workers. He knew that the work rightfully belonged to the sheet metal workers and he struck out after it with every ounce of force he could muster. He struck hard and fast and went right to the core of the matter with the aid of the local sheet metal workers' union, resulting in a complete vindication of the sheet metal workers' unquestioned

bility of the sheet metal contractor carrying the material in stock with the probability of new business and a new source of profit for him. A less energetic and wide-awake sheet metal contractor might have permitted himself to be bluffed by the structural iron workers, with the consequent loss of a very valuable source of additional revenue.

Mr. Born finds opportunity even

right to that work and the possi-

Mr. Born finds opportunity even in complaints. In the fall of the year when customers are urgently calling for service, even becoming unreasonable and obstreperous in their demands at times, Mr. Born has a way of turning this unreasonableness to his own account. Here's



Further Illustrating Projection Drawing

The unit is constructed along the same line as that employed in larger what he does. The customer neglects to have his furnace cleaned until the last minute. When cold weather sets in he wants heat, but about that time everybody else is demanding heat. This condition is explained to the irate customer and then the suggestion is made that the customer permit his name to be put in a book for examination of his furnace so that next year he will not have a repetition of the inconvenience of being without heat when cold weather comes on.

#### Air Conditioning Unit for Small Buildings on Market

A. Gehri & Company, Tacoma, Washington, has recently developed the Silentair furnace fan and air washer to be used with warm air furnaces.



The Machine

fans and air washers. It is a slow speed unit of the centrifugal multiblade type and is equipped with three speed pulleys.

The air washer consists of the spray chamber, spray nozzles, eliminator, pressure gauge and valve, and an electric solenoid valve that is controlled by thermostat in the furnace hood, which starts and stops the fan and flow of water

automatically and simultaneously.

According to the statement of the manufacturers, this fan and air washer is made especially for use with warm air furnaces in the smaller buildings, providing the home owner with an adequate air conditioning system

#### THE FURNIS BIZNES

i sold all the little furnises in the kar i got. I rit a letter to the fackary and sed to send me more small furnises but to send big tops so I cud git more pipes offen it. well sur they sent me tew and sed i cud git em by paying muney down at the bank fur a bill ov ladin. It shows they aint got no conferdens in thaar furnis. They was a reel smart feller hear today as tole me that is the way that fackary allus treats a feller when he gets agoing gud. So i tol him send me a kar of little ones. i got a plenty big ones left. I got a nuther dun fur the 1 kar of furnises what they furgot to send enny draft or cerkerlation with. Enny how it will be cold wether sune and I will no how they hete. Ef i haf to take time frum Koon Huntin to munkey with a furnis that wont hete how can they hope I will git ennuf Koon Skins to pay fur the furnises I sold for them. I hope you alls is the same.

BILL BESTEVER.

# Why Not Get Furnace Repair Business Through Local Coal Dealers?

By K. C. Richmond\*

THE coal dealers are not desirous of going into the furnace cleaning business. Their job is to merchandise fuel. But it is also their business to see that the heating unit is functioning properly, in order that undue criticism be not placed upon the coal. The numerous visits which the coal man makes to the home owner's basement and his examination of the heating plant puts him in an excellent position to tip the furnace dealer off to the location of potential business. Therefore, by cooperating with the coal dealer in this respect the furnace installer can not only help himself, but help the coal dealer as well. Boys, get busy! The coal dealer needs you and you need him. Don't overlook this opportunity.

HAVE you ever tried working with the retail coal merchant?

Coming in contact with the home owner, not once but usually several times during the heating season, the coal man listens to a lot of complaints about the kind of coal he is selling, or about the trouble the home owner is having in keeping the house warm.

As a matter of fact, practically all complaints or troubles the home owner has with his heating system are first charged to the coal used and are made to the coal man himself either over the telephone or in person.

In less than 2% of all service calls made by retail coal merchants the trouble is really due to the coal itself. Yet the coal man in self-defense, if for no other reason, finds it necessary to get out to see the customer and look the heating plant and chimney over in order to correct the situation is possible. Otherwise he is almost certain to lose a customer.

#### Had to Handle Service Calls

The average retail coal merchant has no particular desire, I find, to

take care of work that quite-logically belongs to the furnace man. But for years the retail coal industry has been following up thousands of complaints that are due to faulty smoke pipes, chimneys, faulty furnaces, boilers, or heaters and what not.

In some localities coal men have established contact with outstanding furnace or boiler men through whom they are working very closely.

According to C. M. Terry of the Anthracite Coal Service Bureau in Chicago, 25.7% out of a total of 4,610 service calls were due to improper firing methods. Improper manipulation of the dampers accounted for 8% of the calls.

#### Much Faulty Equipment

On the other hand, 73.1% of the various faults found were due to equipment. Dirty heating systems led with 16.9%. This was followed by bad smoke pipes, improper construction leaks, etc.

Over 14% of the calls were due

to faulty smoke pipes and another 10% to poor chimneys, obstruction leaks at cleanout doors—chimneys being too large or too small.

In over 7% of the calls furnaces or boilers were found too small. Faulty cold air returns accounted for 5% of the complaints.

Unsatisfactory warmair pipes accounted for 2.2% of the trouble. Faulty grates were also a factor.

Remember that in every case the consumers' complaint was that the coal was of inferior quality, as Mr. Terry pointed out.

"In all cases the Anthracite Coal Service engineers were accompanied by the retail coal merchant or his employe, which makes this information even more convincing and accurate," comments Mr. Terry. "You will note that as a result of this survey we have definitely proven that 98.8% of all complaints on coal were directly chargeable to the equipment, or to the method of firing or caring for the heating plant."

A great many coal men are doing furnace vacuum cleaning work, not because they want to, or because they haven't any work to do, but because they have had to get out and show their customers that dirty furnaces or chimneys are responsible

<sup>\*</sup>Written exclusively for American Artisan by Managing Editor Mid-West Coal Retailer.

for some of the trouble they had been having in heating their homes.

Wherever furnace men have adopted vacuum cleaning on a good, business-like basis coal men are generally working with the furnace men. Such furnace men are tipped off about home owners each season who are having trouble with their heating plant, and the coal man is protecting his customer and himself and giving the furnace man a chance to pick up some good business.

Many times new grates or connecting pipes or some repair work can be sold when the furnace man gets in the home owner's basement. It appears to be a profitable business when one goes after it in the way it should be handled.

The coal trade has lost some business to oil or gas. Consequently, the coal man wants to hang on to every customer he can—naturally. This is the reason why they are now selling Domestic stokers in so many communities.

Indeed, some 60% of the stoker distributors in the United States are now coal men. Coal men are selling them because they felt that if they didn't just that many more customers would turn to oil or gas. Naturally, the coal man feels very friendly toward the few outstanding installers in the warm air heating field that are selling modern equipment and installing it correctly.

#### **Establish Contacts**

Coal men, you will find, are quite ready to cooperate, and will with pleasure whenever they can. Furnace men, therefore, will find it to their distinct advantage to establish contact with some of the outstanding coal men in their community with the thought in mind of taking care of some of the repair jobs that come in to the coal man as complaints against the type of coal delivered.

Coal men will be more than glad to refer their service calls to progressive furnace men who are really on the job, and who will play the game in a good, business-like fashion.

The furnace man who does work with the coal man cannot but pick

up a lot of repair work, and some mighty good prospects for a new heating plant as well. The coal man in return can offer his customers better service by handling complaints in an efficient, satisfactory manner and help prevent the customer from turning to other fuels.

Isn't there every reason, I repeat, why the furnace man and the coal man should work closely together to the mutual satisfaction of all concerned?

#### Cuyahoga County, Ohio, Legionnaires Honor J. M. Saunders, Ohio Sheet Metal Secretary

J. M. Saunders, Secretary of the Ohio and Cleveland Sheet Metal Contractors' Association, was elected chairman of the Cuyahoga County Council, American Legion, on November 20th by delegates from 27 posts.

Mr. Saunders, whom everyone in Ohio sheet metal and warm air heating circles knows to be one of the most aggressive and well liked secretaries the association has had, is a captain in the quartermaster branch of the Officers' Reserve Corps. During the world war he was a first lieutenant in the Motor Transport Corps of the U. S. Army. He was one of the founders of the Cuyahoga County Council and has served on the executive committee of that body since its foundation, and his election as chairman of the council by delegates from 27 posts of the American Legion is a vote of confidence which he has worked hard to earn and of which he can be justly proud.

The Ohio sheet metal contractors have in Mr. Saunders an exceptionally alert and active secretary. With proper cooperation there is little that he cannot accomplish. It is to be hoped that Ohio sheet metal contractors will take advantage of their splendid opportunity by encouraging Mr. Saunders with their wholehearted cooperation to give full rein to his splendid executive abilities in building a strong sheet metal organization.

His election to the general chairmanship of Cuyahoga County Council of the American Legion indicates what folks outside of the sheet metal industry think of him. Congratulations are in order.

#### Madison, Wisconsin, Sheet Metal Local Holds Monthly Meeting

The Madison, Wisconsin, Sheet Metal Contractors' Association held a meeting on Monday evening, November 25. There were about ten contractors in attendance.

Various phases of the sheet metal and warm air heating business were discussed in an endeavor to find ways and means of eliminating the price-cutting evil in these two industries. The practice is becoming so prevalent as to endanger the stability of the industry. What to do to correct the malicious evil is the big question before the Madison men.

#### Boosters or Knockers

When you hear a Knocker, reverse his talk and you have a Booster!

Knockers are a funny breed. Hating what they cannot be. Full of malicious mischief and character mutilation—practice sabotage. This class always double-cross their patrons; are disloyal to every friend-ship and suffer from B. O. Advise one to tell his story to his rival, the bombast will shrink, for being a coward, he cannot perform his despicable business in public.

Every business has this parasite. When you meet one he generally starts with a burlesque hearty laugh, "Hear this about \* \* \*," naming his rival. Make up your mind his former monopolistic business has received a jolt.

A Booster for his own town was a man who heard his competitor was in trouble due to a too rapidly growing business. He called on his rival, whom he did not know personally, and introduced himself. "Understand you are in trouble; here is a check for \$58,000. Who is jamming you?" Being informed, he called up the "Jammer." "Cancel all my orders; you jam my competitor, you jam me and this town."

## Profits Possible in Pushing Oil Burners

THE PRICE of safety is eternal vigilance. Foresight to sense changes in trends of business before they actually take place and the willingness and courage to alter the course of that business soon enough to keep it just ahead of general acceptance of the necessity for

change are said to be among the attributes of a successful business man. There is truth in that statement, for times, conditions and demands change, and the man who senses these changes far enough in advance to do something about it is the one who is generally the head of a successful and prosperous business. The changes in business may be likened to one of those floating

islands in the South Pacific that we read about. To all appearances they are terra firma, but they are slowly dissolving, and unless the person standing on them is fortunate enough to discover their dissolution in time to permit him to step off while they are still solid he is apt to be compelled to swim or sink shortly.

It would seem that such a dissolution were taking place in the sheet metal industry and unless order is brought out of chaos within the next few years it is going to work a hardship on a great many contractors. That change has been

THE accompanying article shows how one sheet metal and furnace contractor found the sale, installation and servicing of oil burners a profitable substitute for sheet metal work in which price cutting raged so terrifically as to make profits practically impossible. You may be in a similar situation and this article may show you a way out.

greatly augmented by the activities of many of the sheet metal and furnace men themselves. The tendency to substitute price cutting for real service and salesmanship has already reached a stage where it is becoming increasingly difficult for the established sheet metal contractor to get work at a price that will pay the costs and permit a profit. It is hard to believe, but there are men

in the industry who will resort to any means to take a job away from some other man. Whether they make or lose money on the job appears to be a secondary consideration with them.

In order to alleviate that condition sooner or later it will be necessary to create

some kind of an artificial barrier or standard which each man will have to meet before he can engage in the sheet metal and furnace business if the industry is to survive. But in the meantime there are many contractors who sense this possible difficulty, and what they are doing about it should be interesting to others.

The experience of Charles W.

Pansch, Bridge and Ontario Streets, Racine, Wisconsin, in that respect is sufficiently general to warrant review and worthy of consideration by other contractors. Mr. Pansch is exceedingly openminded, a business man of the highest calibre. He is active in Wisconsin as well as national sheet metal association work and has the cooperative spirit to a high degree. He is well thought of by business associates and towns - people alike. He keeps records and knows his costs of doing business well enough to keep him from taking work at a figure that

> (Continued on Page 178)

#### Buy a DEPENDABLE Oil Burner



When you make up your mind to burn oil—you'll have to select an oil burner. If you select the WAYNE for your home, office or apartments, we will take care of every detail and you can forget that winter comes. That is the reaction of all the WAYNE users everywhere.

BRIDGE AND ONTARIO

1929

PHONE: JACKSON 573

Buy an ECONOMICAL Oil Burner



The Wayne Oil Burner gives you more heat per dollar. It burns a grade of oil which is greatest in heat value and at the same time cheapest in price. Many homes in Racine are now enjoying Wayne Even Heat throughout the heating season for less than the cost of coal. Apartments are being heated for the cost of a janitors salary—the Wayne Burner requires no janitors care.

Enjoy the comforts of a Wayne heated house this winter and save money. Come in and see us before the cold weather starts. We will gladly furnish you with a list of 100% satisfied Wayne users who have saved money.

1911 C. W. PANSCH

BRIDGE AND ONTARIO

PHONE: JACKSON 573

Two Advertisements Used by C. W. Pansch, Racine, Wisconsin

#### Does Your 'Phone Number Stand Out Prominently!

# Are You Employing Valuable Advertising Space to Advantage?

THE AIM of every sheet metal and warm air heating contractor who wants to build up a good business is to get the location of best possible advantage. From that you would naturally infer that a store on Main Street, next door to the leading bank or movie theater of the town, would be the aim of every sheet metal man entering the business.

However desirous of having a location on Main Street a sheet metal or warm air heating contractor may be, the cost of such an enterprise is prohibitive to many. Therefore they must do the next best thing to it; they cast about for a place in the neighborhoods where real estate is less expensive, but so situated that many folks pass to and fro. That D. C. Meeker's shop at Anderson, Indiana, is an example of how an individual can take advantage of conditions, even though it is imposdistrict of Anderson, there are very few home owners who do not travel frequently to Indianapolis and pass his place in consequence.



A. Troeger's Sheet Metal Shop, South Bend, Indiana. Mr. Troeger Has Overlooked Putting His Phone Number on the Building.

sible to get onto a main street. Mr. Meeker's shop is located on the main highway through Anderson

In the accompanying illustration you will note how Mr. Meeker has endeavored to acquaint people passing his place of business with the type of service which they can secure from him. One feature which he has not neglected to do is to push his telephone number out where it can be easily read and remembered.

When Mr. Meeker decided to go into the sheet metal and warm air heating business he investigated all the possibilities but found that the real estate values were too high for him to put over the idea in the way he wished to do it. Not desiring to be a back alley shop, he naturally left the higher priced district but selected a point of vantage that had been overlooked by some of the older shops.

Although Mr. Meeker has not (Continued on Page 178)



D. C. Meeker's Shop, Anderson, Indiana Who Makes Good Use of Advertising

strategy is more readily accomplished now than formerly because of the ease with which people get around in their motor cars. from Indianapolis. All travel north, east or west must pass this point. So that even though the shop is not located in the business

#### OIL BURNER PROFITS

(Continued on Page 178) will not permit a fair profit in addition to paying the costs. He uses up-to-date methods in carrying on his work.

In addition to all this Mr. Pansch has a determination to do business only at a profit, and this has caused him to seek far and wide for new lines of activity since establishing his sheet metal and warm air heating contracting business in 1911. All through his business career he has made it a cardinal principle to do good work and get good prices for this work, and as a result he built up his business to a point where it occupied a position of prime importance in Racine.

However, price cutting in the furnace and sheet metal business has reached a stage in his city where he absolutely refuses to take a job unless he can get it at his own price. But he is of that group who have foresight and he saw the condition developing and long ago he began casting about for other sources of activity that would permit his business to become sufficiently diversified as to insure proper and continuous expansion.

One idea he hit upon was that of installing copper store fronts, and in this he worked up quite a business, making a good profit. After a time, however, the carpenters and every Tom, Dick and Harry were bidding for this work, slashing prices right and left just to get in, thinking that later on they would make up for it. The trouble is that later on never comes.

However, long before it had reached that stage Mr. Pansch had from this activity withdrawn his main effort and was out seeking new fields. At the present time he is making a good success selling oil burners for all sizes of heating equipment. He is already in the field establishing a good business, while many men are still thinking about it. In many instances he has enabled the purchaser to dispense with the services of a fireman or a janitor and these instances have now grown so numerous that he

maintains a service department, has keys to a score or more of industrial plant fire rooms and apartment house boiler rooms. His main effort is now concentrated on the sale and servicing of oil burners, although he does not neglect the sheet metal and furnace end of the business when he can get the job at his own price. In fact, much of his oil burner work has led to furnace and sheet metal work.

He absolutely will not take work at a price that does not permit a profit.

No truer words were ever spoken than, "The price of safety is eternal vigilance."

#### EMPLOYING ADVERTISING SPACE

(Concluded from Page 176) been in business for very long, he has already established a very excellent reputation for his quality and service. There are, of course, a number of other good sheet metal and warm air heating shops in Anderson located in the business section, and these follow to a great extent the idea which should prevail in the sheet metal industry; that is, they not only do good work, but have very pleasant surroundings in which to interview customers. But the idea here is to show how the sheet metal man can make the most of his opportunities even though he is not in the business section of the

In the second accompanying illustration is shown the shop of Andy Troeger, 511 East Jefferson Street. South Bend, Indiana. Mr. Troeger's shop is just across the river on one of the main traveled highways. The shop is built on a sort of angle so that motorists leaving the main business district of South Bend have his sign staring them in the face as they cross the bridge. The shop is painted white with large black lettering. There is only one thing that Mr. Troeger has omitted and that is his phone number. That should be on there in large letters. Both of these men could make better use of their windows than they are now doing, but at least they

have a sign letting folks know what line of business they are in which is right and proper and what everyone should do.

#### Illinois Sheet Metal Contractors' Association Attend Northern District Meeting at Ottawa

The Illinois Sheet Metal Contractors' Association of the Northern District held their annual district meeting at Ottawa, Illinois, the third week in November, Chas. F. Radtke, Secretary. Thirty-five members attended the meeting.

Figuring sheet metal work direct with the architect and owner was the principal subject under discussion. The abuses of price peddling among general contractors was thoroughly discussed and a plan worked out to endeavor to put a stop to it. Ottawa Sheet Metal Contractors' Association at a dinner.

After the meeting the members gathered at the American Cafe, where they were entertained by the Ottawa Association at a dinner.

R. J. Jobst of Peoria acted as toastmaster of the evening (and you know with Rudy as toastmaster there is never a dull moment). Talks by Peter Beigler, President Jos. L. Walter, Fred Bremer, Jack Stowell and others were interesting and instructive and enjoyed by everyone present.

The South Central District of the association held their annual district meeting at Peoria, Illinois, recently. There were thirty members in attendance at that meeting.

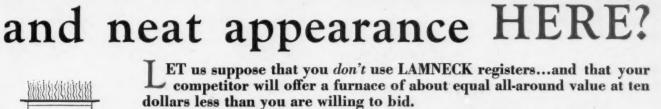
Problems of "Price Cutting" among general contractors and price cutting among sheet metal contractors were thoroughly discussed. Many other subjects pertaining to the industry were also taken up for discussion.

After the meeting the members present were taken to Mossville, where they were entertained by the Peoria association at a dinner at Crawl's Inn. Vice-President Frank Eynatten of Peoria filled the roll of toastmaster of the evening. Talks by President Jos. L. Walter, George Harms, R. J. Jobst, G. J. George and others were interesting and enjoyed by everyone present.

CLEAN!



## How about efficiency... cleanliness

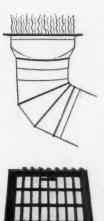


Will you lose the job?...Cut your price?...Knock your competitors?

Not if you are wise!

What you will do to land that job for yourself (if you are wise) is stick to your price and give the customer more value for his money by furnishing a set of LAMNECK Improved registers. Then, if you are wise you will put LAMNECK registers on every job. They are better looking, far more efficient, and decidedly cleaner. With them you can offer more value on the register end of your jobs and make more sales.

Efficiency and cleanness are just as important up at the register as down in the furnace...appearance is more important. LAMNECK has recognized the importance of correct register design by producing truly efficient, clean, good looking registers: LAMNECK Improved registers give you more to sell on, and actually more to sell. Yet they do not cost you a cent more than other registers.



EFFICIENT!

## **IMPROVED**

NOTE: If you have not had an opportunity to examine LAMNECK Improved registers, we want to send you a sample LAMNECK floor register. No other register is so efficient...no other so easy to keep clean...and we believe you will agree that no other register is so good looking. It represents the first actual improvement in register design in forty years. Send the coupon for your sample today. No obligation.

THE W. E. LABINEUR U.	
416-436 Dublin Ave., Columbus, Ohio	
Send me without obligation a sample floor	

egister.

Address.

City\_

# Practical Heating Know Prime Requisite to Samuel Warm Air Heating Warm Air Heat

"THE furnace installer's failure to employ correct engineering principles in his installations has operated as a limiting factor on the warm air heating industry, giving the public the impression that that type of system is suitable for small house heating only. That fallacy must be corrected."

Says E. A FI

CONCRETE proof exists in abundance that successful merchandising of warm air heating equipment and service requires a combination of practical heating knowledge and personal contact, in addition to the application of correct selling principles. That this combination of assorted abilities is not permanently to be had in their

branch managers by those factors in the warm air heating industry who are attempting to market their products via the "direct" route is also plainly evident.

The reason is simple enough. Self interest governs the activities of most people, and, like water seeking its level, every man endeavors to get into the best possible position or station in life that his abilities will permit. Any branch manager of a direct selling organization who has real heating knowledge, sales

> ability and initiative can make a great permanent success on "his own" than he can working for another.

> As evidence of this fact let us cite the case of E. A. Freed, 1530 Third Avenue, Moline, Illinois. For a number of years Mr. Freed was a branch manager for a certain direct selling organization. The success with which he marketed that company's products in the tri-cities-Moline, Rock Island and Davenport-stands unquestioned as a matter of record. That he made himself, as branch manager, the bane of the local dealers in those communities is also common knowledge. This is not said in disrespect to Mr. Freed. In his activities he was governed by the "system" of the company under which he operated.

> However, the very thing of which Mr. Harris of



Business Show Display Staged by Mr. Freed at Moline Recently He Finds It Pays to Do This, as Town's Folk Never Neglect to Attend These Shows.

# nowledge (Not Theory) o Successful Sale of leating Service "THE greatest error that a warm air furnace installer con make

FREED

THE greatest error that a warm air furnace installer can make is to concentrate his main effort on selling. In the furnace business more sales are made in the long run and more permanent success is achieved by consistently endeavoring to give each customer a fundamentally correct heating plant."

South Bend, Indiana, spoke in his recent article in AMERICAN ARTISAN occurred to Mr. Freed. The exacting demands of the home office irked him. He chafed at the bit, as a restive horse, under the check reining to which he was subjected.

The practices in which he was forced to indulge in order to meet the arbitrary sales quotas set by a swivel chair sales manager in a distant city and the company's unwillingness to listen to practical suggestions made by the man on the firing line gave him no peace of mind, and finally resulted in his determination to sever his connection with that organization and to compete with them in the same territory "on his own." He left and the blessing he received in so doing was an assurance that he would be lucky if he lasted three months. Before proceeding let it be said that those men in the retail end of the warm air heating business who have large capital investments are exceedingly fortunate in having such a shining example in their midst. It vindicates their own stand and strengthens their belief that their own judgment in the matter is right.

It was five years ago that Mr. Freed severed his connection with the direct selling organization and went into business for himself. The result has been that, instead of fail-

ing after three months, as was so generously predicted for him, he has been able to better the record he made as branch manager of the direct selling organization. Another thing that is significant here is the fact that during this period the sales of the direct selling organization in that territory have dropped off in almost direct proportion to the in-



Warm Air Heating Window Display of E. A. Freed, 1530 3rd Ave., Moline, Illinois. Windows and Sales Rooms Indispensable, Says Mr. Freed.

crease experienced by Mr. Freed.

Mr. Freed's warm air heating display rooms in Moline are only about five doors away from that of the direct selling organization. Significant also is the fact that Mr. Freed is tied up with one of the most progressive furnace manufacturers in the country. He markets a high-

grade product and is known to his competitors as "good competition," because he gets a price for his product and services that permits him to pay for his merchandise and labor and make a fair profit for himself.

While during the first two years of his present venture his installment selling predominated, at the present time his cash sales amount to 80 per cent of his total business, indicating that his installations are going more and more into the better class of homes—a very desirable objective from every standpoint.

But the question that still remains unanswered is, how has it been possible for Mr. Freed to make the record he has in so short a time, especially when at the outset he was obliged to do a complete r i g h t-aboutface. And that, too, in the identical territory where he operated as a branch manager. Let Mr. Freed answer the question himself.

"The satisfied customer is the answer," said Mr. Freed without a

moment's hesitation, "and the only way to secure the satisfied customer is through a scientific application of correct heating principles. That one thing and that alone will outstrip any kind of advertising that you can possibly do. Don't misunderstand me in making that statement as advocating the discontinuance of all other forms of advertising. I do not mean to minimize the impor-

tance of other forms of advertising. What I mean is that the application of scientific heating principles coupled with an aggressive sales policy is the only way that cumulative permanent success can be attained in the warm air heating industry.

"The big trouble is that most men in the warm air heating industry

Read what your townsfolk have to say about the WEIR Furnace Heating Plants in their homes.

We have had our WEIR Furnace now for 18 years and 14 has proven to be a senderful furnace as we must look a growth of the senderful furnace now for have a large 14 has proven to be a senderful furnace now for have a large 14 has proven to be a senderful furnace now have a large 14 has proven to be a senderful furnace now have a large 14 has proven to be a senderful furnace, as the WEIR we were furnace, as the WEIR we have your good to the work of the large 14 has proven to the senderful furnace now have a large 14 has proven to the senderful furnace now have the senderful furnace install have the senderful furnace install have to senderful furnace now have had been to the senderful furnace now had to the senderful fu

This booklet contains the names and addresses of 75 satisfied users of Freed Warm Air Heating Service. This is mailed to prospects.

know nothing about the scientific principles of heat. Some of them haven't even the meanest conception of what heat is. I would be willing to wager a pretty substantial sum of money that 75 per cent of the men in the industry, including manufacturers, couldn't even give an intelligent definition of heat if they were asked for it. They are mentally lazy. They accept too blindly what

is written in text books and do too little thinking and analyzing of the facts and conditions on their own account. Their attitude is that if Professor So-and-So said it or wrote it, it must be so. Therefore, having no definite understanding themselves of what heat is, how can they be expected to merchandise and to en-

gineer into a serviceable position so as to insure the purchaser complete satisfaction that which they do not understand? It can't be done.

"You see," continued Mr. Freed, "most people in the industry fail to realize that the marketing of a warm air heating system is not the same as selling a stove or an electric toaster, a washing machine or any other piece of merchandise that requires only to be brought in, set down and started going after making proper connections; in other words, such items are "factory tested" and are supposedly as free from mechanical imperfections as it is humanly possible to make them before they leave the factory. The fundamental defects have been removed at the factory. Any trouble arising after installation is purely mechanical and quickly adjusted.

"Whereas, in the case of a warm air heating plant, the unit itself can be ever so perfect when leaving the factory and still not give the cus-

tomer satisfaction due to faulty installation because of a lack of a perfect understanding of the needs in the case on the part of the installer. Every job is an individual installation. That is precisely why the direct selling method falls short. Concentration in that case is too much on sales and not enough on determining and supplying the indi-

(Continued on Page 186)

## Know How : Apply Standard Code?

#### Here's Chance to Test Your Skill

FROM observation and hearsay we are convinced that there are still a large number of warm air furnace installers who do not understand the proper application of the Standard Code.

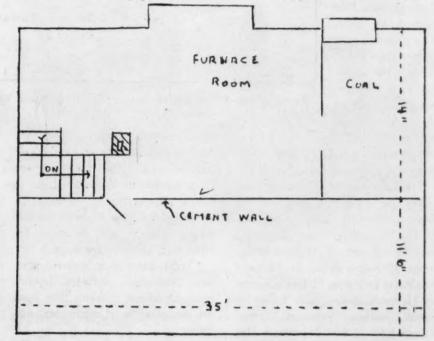
In order to give these men a chance to test their knowledge in this respect there are reproduced herewith the floor plans of a new brick veneer bungalow, having five rooms and a bath on the first floor. On the second floor there is one bedroom having two exposed and two semi-exposed walls. This bedroom is to be heated.

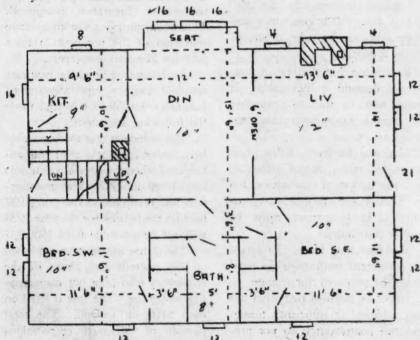
The ceilings on the first floor are 8 feet high. On the second floor they are the same, while in the basement the ceiling is 7 feet high. The chimney is 12 by 12 inches.

All the data necessary for the application of the Standard Code is given on the floor plans. In addition you will note that there is a

semi-exposed wall on the attic floor.

In the basement a concrete wall separates a portion of the main room and it is entirely possible that a warm air duct may have to be run through this wall. In running the warm air duct through the wall, indicate how you would do this; that





Basement and First Floor Layout of Test Furnace Installation. See if You Can Work It Out.

is, whether you would cement the duct tightly to the wall or use a collar providing an air space between the duct and the wall.

A price at which this job sold has been placed upon the job which is correct for the locality in which the job was installed. That price, of course, would not hold for all sections of the country, but if the installers will put their own prices upon the sketch when they return it, this price which the job was sold for will form a good basis of comparison.

We are not going to give a furnace price in this job, because it is desired that each furnace installer figure the job out and place his own costs on it all the way through. In sending the sketch in you do not necessarily need to put your name

on it. Or if you have any objection to having the material you send in published under your name, this will be omitted.

The object in these floor plans is to give you a chance to test your ability to use the Standard Code correctly. After time enough has elapsed to allow everyone who cares to work out the job, the application of the Standard Code to the job will be

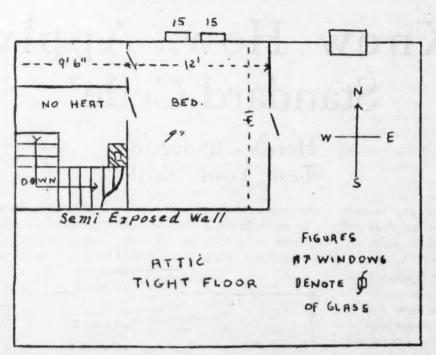
published, so as to give you a basis for checking your own work even though you do not send it in to us.

The dimensions of the various rooms are given as follows: First floor—kitchen, 9 feet 6 inches by 10 feet 6 inches; dining room, 12 feet by 15 feet 6 inches; living room, 13 feet 6 inches by 14 feet; southwest bedroom, 11 feet 6 inches by 11 feet 6 inches; bath, 5 feet by 8 feet; southeast bedroom, 11 feet 6 inches by 11 feet 6 inches. The bedroom on the second floor is 12 feet by 14 feet. The glass and door exposure is clearly marked so that all the information necessary for the figuring of the plan is available.

#### Schwab Gives Ten Rules for the Maintenance of Prosperity

We have reached in this country an amazing degree of general prosperity, with American business on the whole no longer facing an uphill climb, according to Charles M. Schwab, chairman of the Bethlehem Steel Corporation. The problem today, as he sees it, is an entirely new one. It is what to do to make prosperity permanent. Of course, no one, he holds, has any patent rights to continuing business success.

"There are a few fundamental



Second Floor of Furnace Installation Job. How Would You Handle This?

considerations which all of us may find helpful to keep in mind," said Mr. Schwab. "The following ten rules seem to me to hold the key to lasting prosperity:

"Pay labor the highest possible wages. Prosperity is intimately related to a liberal wage scale.

"Treat labor as a business partner. Successful industry depends more on human relations than upon the organization of money and machines.

"Conduct business in the full light of day. Public confidence and public suspicion may be separated only by a door.

"Remember that the law of supply and demand is inexorable. It would also be well to remember that there is no necessity for producing an excess.

"Live and let live. Even prosperous industries cannot afford to have the backward industries too far behind the procession—prosperity to be permanent must be equably distributed.

"Welcome new ideas. To establish permanent institutions we must always be prepared for change.

"Never be satisfied that what has been achieved is sufficient. Smugness and complacency do not promote progress.

"Operate business on the most

economical basis. Price - cutting, over - expansion, uneconomical methods of distribution are just as harmful to business and to the public as price-fixing, monopolies and rebates.

"Look a head and think ahead. It is easier to avoid depressions than it is to cure them.

"Smile, be cheerful, and work upon the basis that the fundamental pur-

pose of business is to promote the happiness of human beings."

#### Missouri Employers Get Compensation Insurance Charge Reduced

Employers of Missouri will have one fixed charge reduced in many instances as a result of a revised schedule of workmen's compensation insurance rates, which will become effective in the state January 1, 1930. The new schedule, which was announced recently by Superintendent of Insurance Joseph B. Thompson, provides for an average reduction of 2.4 per cent in rates. paid by Missouri employers.

In commenting upon the new rateschedule, Deputy Superintendent of Insurance Joseph G. Holland madethe following statement:

"The reduction was made possible by a lower loss ratio than was anticipated when the previous rate was. established in 1927. The investigation was restricted to the year 1927 because the figures for the year 1928: will not be available until 1930.

"The compensation rates are based on the payrolls and losses of the employers who take out compensation insurance. The rate is fixed on each \$100 of payroll. The total payroll of Missouri corporations, which come under the act was \$665,—389,596 in 1927."

#### National Sheet Metal Association New Book Gets Review in Government Publication

The big book of the National Association of Sheet Metal Contractors, "Standard Practice in Sheet Metal Work," is reviewed in the November issue of the Commercial Standards Monthly, issued by the National Bureau of Standards of the United States Department of Commerce, Washington, D. C.

The review reads as follows:

#### New Book on Sheet Metal Work

"The National Association of Sheet Metal Contractors of the United States, through its trade development committee, announces the publication of a book entitled, 'Standard Practice in Sheet Metal Work.'

"This book contains the standards of recommended practice in fabricating and erecting sheet metal work for the building industry, and covers the following subjects: Roofing, gutters, conductors, flashings and corrugated iron work, skylights and ventilators, metal cornices, metal ceilings, warm air furnaces, heating and ventilating systems, blow pipe and exhaust systems, fire and Kalamein doors, hollow metal doors and trim, hollow metal windows, restaurant, kitchen and hotel equipment, and protective coatings and paints.

"Members of the National Association of Sheet Metal Contractors of the United States and representatives of the National Hardware Association of the United States, jointly cooperated, under the auspices of the division of simplified practice, with other interested elements of the industry, in the formulation of simplified practice recommendations for eaves trough, conductor elbows and fittings, hollow metal doors, and Kalamein doors."

## Use for Carbon Paste in Welding Processes

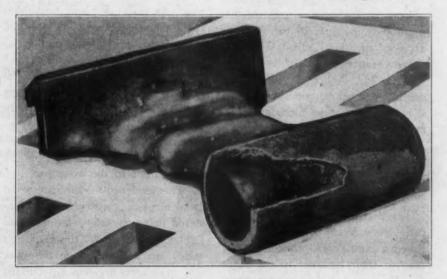
Repair of metal parts by welding is common practice today and the oxy-acetylene process is saving many valuable dollars which formerly went into the purchase of replacements.

Now, when a casting is broken or defective, the damage is quickly remedied by the welding blowpipe. The same applies to a machine part or any metal piece which may have suffered a crack or complete fracture. When all of the broken parts are saved and delivered to the plant welder for repair, the job is comparatively simple, but when pieces are missing it is necessary to build up the missing sections with a filler core which will resist the heat of

After the welding is completed the piece is annealed, and when cold the carbon paste is easily removed. The inside of the weld will be found to possess the correct contour and little or no finishing should be necessary.

#### Tennessee Court Rules Accepting Aid Is Bar to Compensation Suit

Voluntary acceptance of medical treatment by an injured employe at the expense of his employer constitutes an election to accept such treat-



Repairing by Welding

the welding flame. This is accomplished by using carbon paste.

The following description of the use of carbon paste shows the method employed on a casting where a piece was missing. The illustration shows a cast iron support for a drill table. The break is first filled with carbon paste, which is smoothed to shape with a putty knife. It is necessary that the paste be packed in tightly so that the molten metal will stay where it is intended, thus saving considerable effort in grinding and machining after welding is finished.

Near the center of this casing is a 1/4 inch threaded hole for a ser screw, part of which was broken out. This hole is carefully filled, and after the welding is finished it is usually necessary only to rethread the hole. If carbon paste or carbon rod is not used for this purpose new holes must be redrilled and tapped.

ment as "compensation" under the state compensation act, even though the employe is not disabled for the duration of the seven-day waiting period prescribed in the act for the payment of monetary compensation, and therefore the employe is deprived of his right to recover damages from a third party whose negligence was the cause of the injury. This was the holding of the Tennessee Court of Appeals on November 9 in the case of City of Nashville vs. Latham.

Mr. Latham was injured when a wagon he was driving overturned as a result of a wheel dropping in a hole in a Nashville street. At the direction of his employer, Mr. Latham received medical treatment from a physician employed by the employer during the six days he was disabled.

At the trial in the lower court the city moved for a directed verdict in

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its favor at the close of the evidence on the ground that the employe, having accepted compensation from his employer under the compensation act, cannot hold the city liable in damages. The trial court overruled the motion, but the Court of Appeals held that the motion should have been sustained. Accordingly, the judgment was reversed and the suit dismissed.

#### F. R. Bishop Resigns as Manager, Furnace Division, Detroit-Michigan Stove Co.

Fred R. Bishop has resigned his position as manager of the furnace division of the Detroit-Michigan Stove Company, Detroit.

What Mr. Bishop's future plans are has not yet been disclosed, but it is known that he intends to remain in the furnace business.

#### Richardson & Boynton Establishes a New York Branch

The Richardson & Boynton Company, New York City, have established a New York branch to take care of their business in the eastern division, including metropolitan New York, Connecticut, eastern New York State, New Jersey and the northern tier of Pennsylvania.

H. L. Anness has been appointed as manager of this branch, with A. B. Munro as assistant.

For the past fifteen years Mr. Anness has been in charge of the New England branch of the company, prior to which he was connected with the New York office. His long familiarity with the eastern territory, together with his intimate knowledge of company policies, fit him to an unusual degree to take up his new duties with the certainty of unqualified success.

Mr. Munro likewise has been associated with the company for many years and is thoroughly familiar with the New York territory and the trade demands in that division.

It was announced by the Richardson & Boynton Company that the establishment of the New York branch under the leadership of Mr.

Anness and Mr. Munro assures the trade in the eastern division unqualified service which it has been impossible for the company to offer in the past.

#### Metal Supplants Wood in New Cabin Plane

The tendency to supplant wood with metal in the manufacture of airplanes is indicated in a statement of engineers of the Ryan Aircraft Corporation, St. Louis, that only 298 pounds of wood is used in the new six-place Ryan brougham cabin plane. This includes all the wood used in the construction of the wing, fuselage, fairing and other parts. The ship weighs 2,250 pounds, less gasoline, oil, passengers and pilot. Thus in this plane only 17 per cent of the entire construction is of wood, and, with the exception of the wing, there is no strain on any of the wood parts.

"This tendency to eliminate wood from airplane construction has resulted in much safer, stronger and lighter construction," the engineers state. In a Ryan plane the pilot and passengers are now surrounded by a steel tubing structure which protects them from injury, even in a cresh

Steel propellers have been substituted for the old wooden ones. Instrument boards are made of micarta, cabin framework is largely of aluminum, and wood is used only for the wings, fairing and as a framework for upholstering the cabin.

#### HEATING KNOWLEDGE

(Continued from Page 182) vidual engineering needs of each job. With a stove you haul it in, connect it to a stovepipe and chimney and start the fire. With the warm air heating system, if scientific heating principles are not employed on the installation, it immediately refuses to work and the buyer thereof, not knowing wherein the trouble lies, condemns that type of system.

"This failure to employ correct engineering principles has operated as a limiting factor on the industry, giving the public the impression that that type of heating system is for the smaller homes and only then when it is desired to 'get by' as economically as possible. Whereas, there is no logical reason why a warm air heating system cannot be made to function efficiently in an apartment house, for instance. I have a gravity job installed in a 4-apartment building that works perfectly.

"If only more furnace installers would endeavor to understand what heat really is and how it travels, their job of getting the 'satisfied customer' would be made much casier."



National Warm Air Heating Association, Columbus, Ohio, December 3 and 4, 1929. Allen Williams, 174 East Long Avenue, Columbus, Managing Director.

Kentucky Hardware and Implement Association Convention, Brown Hotel, Louisville, January 14, 15, 16 and 17, 1930. J. M. Stone, Secretary, 200 Republic Building, Louisville.

Texas Hardware and Implement Associatoin Convention and Exhibition, Houston, January 21, 22 and 23, 1930.

American Society of Heating & Ventilating Engineers and International Heating and Ventilating Exposition, Philadelphia, January 27 to 31, 1930. A. V. Hutchison, 29 West 39th Street, New York, Secretary.

Missouri Retail Hardware Association Convention and Exhibition, New Hotel Jefferson, St. Louis, January 28, 29 and 30, 1930. F. X. Zecherer, Secretary, 5106 North Broadway, St. Louis.

Indiana Retail Hardware Association Convention, Manufacturers' Building, Indiana State Fair grounds, Indianapolis, January 28, 29, 30 and 31, 1930. G. F. Sheely, Secretary, 911-913 Meyer Kiser Bank Building, Indianapolis.

Ohio Hardware Association Convention and Exhibition, Columbus, Ohio, February 4, 5, 6 and 7, 1930. James B. Carson, Secretary, 315 Mutual Home Building, Dayton.

Wisconsin Retail Hardware Association Convention and Exhibition. Auditorium, Milwaukee, February 4. 5, 6 and 7, 1930. B. Christianson, Secretary, Stevens Point. G. W. Kornely, Exhibit Manager, 1476 Green Bay Ave., Milwaukee.

Illinois Retail Hardware Association Convention and Exhibition, Hotel Sherman, Chicago, February 11, 12 and 13, 1930. Paul M. Mulliken, Managing Director, Elgin.

Iowa Retail Hardware Association Convention and Exhibition, Hotel Savery and Des Moines Coliseum, Des Moines, February 11, 12, 13 and 14, 1930. A. R. Sale, Secretary, Mason City.

#### WHO'S WHO, WHERE!

PORTLAND, ORE. — The Everlasting Weatherstrip Co., metal weather strip, has been incorporated with a capital stock of \$5,000, by James L. Henderson, J. R. Lynch and S. Linstadt.

The Bay E. Bealey Co. 146 Dec.

The Ray F. Becker Co., 146 Page street, has the sheet metal contract for the warehouse of the Plumbing & Heating Sales Corporation, 170 East Sixth

street.

The J. C. Bayer Sheet Metal Works, 204 Market street, has the roofing and sheet metal contract on S. P. Thompson business building.

TACOMA, WASH.—The Old Tacoma Sheet Metal Works has the contract for work on the building at 1101 Dock street for the city.

MINNEAPOLIS, MINN.—The M. A. Welter Co., 2118 Lyndale Avenue S., has furnace heating contract for residence of Archie D. Walker, Northome, Lake Minnetonka.

FARGO, N. D.—The Fargo Cornice & Ornament Co. has sheet metal contract for service station of International Harvester Co.

MILWAUKEE, WIS .- The Milwaukee Corrugating Co. has the sheet metal contract for Masonic Temple at Legrand, Iowa.

WATERLOO, IA.—The Waterloo Metal & Manufacturing Co., corner Miles and Commercial streets, has the sheet metal contract for residence of Nels P. Soren-

Los Angeles, Cal. — The Forderer Cornice Works has the metal window, contract for the Telephone Building.

The Eades Sheet Metal Works has been awarded the sheet metal contract

for Emma Lynch apartment building. The National Cornice Works, 1321 Channing street, has the Kalamein and tin-clad door contract, and the Utility Sheet Metal Products Co., 146 S. La Brea avenue, the sheet metal contract for the factory of Willard Battery Co.

Emil Brown has the sheet metal work

contract for the H. Rosof warehouse.

The Main Cornice Works has the contract for sheet metal work for addition to motor factory of U. S. Electric Mfg. Company.

McClunry Brothers, 10231/2 Santa Fe, have been awarded the sheet metal con-tract for factory building of Mercantile Investment Co., in Hollydale.

OAKLAND, CAL.—The East Bay Sheet Metal Works, 1101 Market Street, has been awarded the sheet metal contract for the dormitory building at the Uni-versity of California, Berkeley, Cal.

NUTTER FORT, W. VA.-Cornelius Aizpuri, of the Sutter Roofing & Cornice Co., will erect a new business building to replace the burned structure.

New Orleans, La.—The American Sheet Metal Works, 331 N. Alexander street, has the bronze and ironwork con-tract for the Merchants National Bank Building, Port Arthur, Tex.

DANFORTH, ILL.-Jacob Dykema, Sr., is slowly recovering from an accident in which he suffered injuries to his back and internally. A scaffolding twenty feet in the air upon which he was standing broke, letting him fall to the ground. He was formerly located at Ashkum, Ill.

DALLAS, Tex.—The Gilbert Manufacturing Co., Marvin Bldg., has the metal

window and Kalamein door contract for Cottle County Court House, Paducah,

CHESTER, PA.—Robinson's Protective Metal & Waterproofing Co. has been awarded the roofing and sheet metal contract for the transparent paper plant of the Sylvania Industrial Corporation, Fredericksburg, Va.

CEDAR RAPIDS, IA.—The Cedar Rapids Sheet Metal & Cornice Co., 710 S. 3rd Street, has been awarded the sheet metal work on the garage of the Manchester Auto & Supply Co. in Manchester, Ia.

SAN FRANCISCO, CAL.—The Western Metal Manufacturing Co., 1160 Bryant street, manufacturing metal shelving, cabinets, counters, lockers, etc., has opened its new plant in South San Francisco, which will take care of all regular lines, and the old plant will be given over to the manufacture of special work from buyers' own designs.

PORTLAND, ORE. — The Northwestern Heating & Engineering Co. has engaged in the heating appliance business under management of J. B. Stokes.

DULUTH, MINN.-Michael J. Harney, a sheet metal and roofing contractor, was recently killed by a fall of 35 feet out of the fly gallery to the stage at the Lyric Theater in that city.

NORTH PLATTE, NEB.—Simon Bros. have the sheet metal and roofing contract for the Cody school.

WATERLOO, IA .- The Waterloo Metal Manufacturing Co., corner Miles and Commercial streets, has the warm air heating contract for residence of C. L. Fincham.

DES MOINES, IA .- The Service Roofing Co., Inc., has been chartered with a capital of \$15,000, by C. E. Sharp and W. P. Phillips.

SAN MATEO, CAL.—The Gaffigan Sheet Metal Works has adopted the group life insurance plan for its employes.

FRESNO, CAL.—A sheet metal working course has been started in the schools for apprentices and journeymen, with A. E. Sullivan as instructor.

OAKLAND, CAL.—The Heating Service Co., Ltd., has been incorporated by Leigh Bancroft, Leon M. Gove and O. G. Foel-The capital of the company is \$10,-

SAN FRANCISCO, CAL.—J. A. Korrell & Co., specializing in cornice and sheet metal work, has moved into larger quarters at 1707 Folsom street. J. A. Korell has for the past 22 years been connected with this line of business in San Francisco. The U. S. Metal Products Co., 330 10th street, has the sheet metal contract for auto sales building of R. A.

The Guilfoy Cornice Works, 1234 Howard street, was the low bidder for the sheet metal work Depot Quartermaster building at Presidio.

The Forderer Cornice Works, 269 Potrero avenue, has the sheet metal contract for office building of Shell Oil Co.

DETROIT, MICH.—The Advance Stamping Co., 5712 12th street, is about to erect a 2-story 65x140 ft. stamping plant, to cost about \$50,000.

Seattle, Wash.—The Washington Sheet Metal Works, 1275 Westlake, has Washington the roofing and sheet metal contract for

apartment building of Gardner J. Guinn,

Los Angeles, Cal.—The H. K. Sheet Metal Works has been awarded the sheet metal contract for the dwelling of Mrs. Priest.

The Main Cornice Works has the sheet metal contract for Bank of America building in Bakersfield, Cal.

The Hooper Pressed Metal Co. has engaged in the ventilator manufacturing business at 631 I. W. Hellman building, under the management of M. J. Hooper.

BALTIMORE, MD.—The Warren-Ehret Co., 53 West Olive street, has the sheet metal contract for Curtiss-Caproni Co. building at the municipal airport.

EDNA, TEX.—The Gainer Tin Shop was one of a number of business buildings recently destroyed by fire.

New Orleans, La.—The Holzer Sheet Metal Works, 317 Burgundy street, has the sheet metal work contract for the \$1,000,000 Hutchinson Memorial Medical building, and the American Sheet Metal Works, 331 N. Alexander street, has contract for the wall ties for the same building.

JANESVILLE, WISCONSIN-F. C. Nobiensky, proprietor of the Globe Sheet Metal Works, 911 South Jackson street, is enjoying a very nice business in sheet metal work at the present time.

Roy Meyers, head of the Meyers Fuel Saver Company, is making good progress with his fuel saver. He has some fine sheet metal installations to his credit and is rapidly assuming a commanding position in sheet metal lines in his city.

Frank Douglas, head of the Douglas Hardware Company, is just completing the sheet metal work on two new school house buildings in his city. He is finding a good demand for sheet metal work at this time. Mr. Douglas is getting out of the furnace business because of the keenness of competition. In spite of the fact that he has a mail order retail store across the street from him, Mr. Douglas is able to sell as much if not more sheet metal. Quality merchandise, when properly explained and thoroughly understood by the customer, is easily sold, according to Mr. Douglas, in spite of the fact that he must get almost double the price charged by the mail order house. According to him it is a matter of selecting the type of trade that can appreciate the difference between a cheap and a quality article.

MADISON, WISCONSIN—Frank Reinick Reinick & Krueger Company, 106 North Frances street, is recovering from a series of operations which he found it necessary to undergo recently. His company is experiencing a good demand for sheet metal work. Competition has become so keen in furnace work, however, and the ridiculous prices at which other furnace men take furnace work is making that business less and less attractive to the reliable contractor.

The firm name of Waldron & Bell, 834 Washington avenue, sheet metal and warm air heating contractors, has been changed to Waldron & Tipple. The firm now consists of C. O. Waldron and J. E. Tipple. This firm expects to participate in a lighting system calebratics which in a lighting system celebration which will take place in their neighborhood in the near future.

M. J. Nilles, 1439 Regent street, is

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now lodged in his new sheet metal shop, where he has space for staging of window displays of warm air heating and

sheet metal products.

C. E. Bates, Inc., 1425 Regent street, have recently moved in their new quarters. An attractive feature of the new location is the ample window and sales display space. The window extends to the floor level and the furnaces and other products it is desired to display are placed upon dollies with castors so that they can be rolled in and out of the window at will. This makes for easy change of window display and furnaces can be moved about the sales floor with little or no difficulty.

The Badger Sheet Metal Works, 1024

The Badger Sheet Metal Works, 1024 Regent street, have an effective way of calling attention to the service they render. A furnace completely cased is perched upon the top of their 1-story building. The front of the structure has the appearance of a dwelling house and it is covered with metal tile. The entire place presents an inviting appear-

ance from the street.



#### "Heat Hustler."

From Accurate Sheet Metal Works, 2346 Milwaukee Avenue, Chicago.

Will you please tell me who makes the "Heat Hustler" which was advertised in American Artisan a few months ago?

Ans.—American Foundry and Furnace Company, Bloomington, Illinois.

#### "Iwan" Ventilators.

From Carr Supply Company, 414 North Dearborn Street, Chicago.

Can you tell us who makes "Iwan" ventilators?

Ans.—Iwan Brothers, South Bend, Indiana.

#### "Farquhar" Furnace

From E. Valkenaar, 4520 Irving Park Boulevard, Chicago.

Please tell me who makes the "Farguhar" furnace.

Ans.—Farquhar Furnace Company, Wilmington, Ohio.

#### Copper Ball Floats.

From Tierney Rotor Ventilator Company, 239 Fourth Avenue S., Minneapolis, Minnesota.

We should like to know where we may purchase copper ball floats that are used for automatically supplying water to vapor pans.

Ans.—Berger Brothers Company, 237 Arch Street, Philadelphia, Pennsylvania; Friedley-Voshardt Company, 733 South Halsted Street, Chicago, Illinois, and

Gerock Bros. Mfg. Co., 1252 Vandeventer Avenue, St. Louis, Missouri.

#### "Acme" Boilers

From West Side Hardware, 1518 Wesley Avenue, Evanston, Illinois.

Can you tell us who makes the "Acme" hot water boilers?

Ans.—E. Keeler & Company, 332 South Michigan Avenue, Chicago. Address of Craig-Reynolds Foundry

From Wendel Furnace & Sheet Metal Works, 246 First Street, Hinsdale, Illinois.

Will you kindly give us the address of the Craig-Reynolds Foundry Company?

Ans.—All the original patterns have been purchased by The Dayton Casting Company, Dayton, Ohio.

#### Torches for Burning Lead

From Union Roofing Company, 1620 Front Street, Ashland, Kentucky.

Please inform us who makes torches for burning lead.

Ans.—Anthony Company, 53 West Jackson Boulevard; Bastian-Blessing Company, 240 East Ontario Street; both of Chicago; Turner Brass Works, Sycamore, Illinois; and Air Reduction Sales Company, Louisville, Kentucky.

#### Electric Signs

From G. C. Fitzgerald, Paducah, Kentucky.

Please tell me where I can get prices and designs on electric signs.

Ans.—American Neon Light Company, 559 West 132nd Street, New York City, and General Outdoor Advertising Company, 515 Loomis Street, and Flexlume Sign Company, 1129 North Dearborn Street; both of Chicago.

#### Address of American Range Corporation

From J. R. Schubert, 115 West Fourth Street, Alton, Illinois.

Can you tell me where the American Range Corporation is located?

Ans.—Shakopee, Minnesota.

#### Address of Silent Glow Oil Heater Company

From A. M. Geyer Sheet Metal Works, P. O. Box 1226, Juneau, Alaska.

We should like to know where the Silent Glow Oil Heater Company, makers of oil burners for stoves, is located?

Ans.—291 Franklin Ave., Hartford, Connecticut.

Coal and Gas Warm Air Circulators From Miller-Jackson Company, 111-119

E. California Ave., Oklahoma City, Oklahoma.

Will you please give us the names of firms making coal and gas circulators?

Ans.—Coal: The Fox Furnace Company, Elyria, Ohio; Gray and Dudley Company, Nashville, Tennessee; L. J. Mueller Furnace Company, Milwaukee, Wisconsin; Oakland Foundry Company, Belleville, Illinois; Peninsular Stove Company, Detroit, Michigan; Rock Island Stove Company, Rock Island, Illinois, and Waterman-Waterbury Company, Minneapolis, Minnesota. Gas: Detroit-Michigan Stove Company, Detroit, Michigan, and L. J. Mueller Furnace Company, Milwaukee, Wisconsin.

#### "Niagara" Furnace

From Walsh Sheet Metal Works, San Antonio, Texas.

Kindly give us the address of the Niagara Furnace Company.

Ans,—There is no such company. However, the "Niagara" furnace is made by The Forest City-Walworth Run Foundries Company, Cleveland, Ohio.

#### Register Shields

From Robert S. Booth, 3048 N. Parkside Avenue, Chicago, Illinois.

I should like to know who makes register shields. Can you tell me who makes the "Gem" line?

Ans.—Beh & Company, 1140 Broadway, New York City, and Hall-Neal Furnace Company, Indianapolis, Indiana. Beh & Company make the "Gem" line.

#### Address of Glazier Stove Company From "Forshaw" of St. Louis.

Will you kindly advise us, if possible, where the Glazier Stove Company is located?

Ans.—This concern, which was located at Chelsea, Michigan, has been out of business for the past twenty years.

#### Address of Pacific Boiler Company

From The Niehaus Furnace Repair Company, Cincinnati, Ohio.

Can you tell us where the Pacific Boiler Company is located?

Ans.—This concern is known as the Pacific Steel Boiler Corporation, and is located at 1401 Builders' Building, Chicago.

## RANDOM NOTES AND SKETCHES

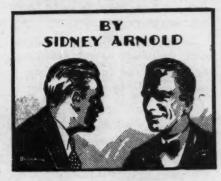
By way of advance notice to all Wisconsin sheet metal contractors contemplating attending the annual convention of that association in Milwaukee, I want to warn you against playing with the dice or entering into any other game of similar nature with Frank X. Reinick, Secretary-Treasurer of Reinick & Krueger Company, 106 North Francis Street, Madison, and former president of the Wisconsin Sheet Metal Contractors' Association. The reason is that Mr. Reinick has a way with him in such games that makes things come his way. If you doubt what I say about it, ask him how he got his Thanksgiving turkey and the celery to go with it. He may have got the mince pie the same way for all I know.

Harvey Manny, Chicago: "Well, Mrs. Oldsome had to tell her age in court this morning."

Mrs. Manny: "I'll bet she was awfully shy."

Harvey: "Oh, awfully shy—about fifteen years, my dear."

Here's one on F. B. Elliott, a subscriber living in Villa Park, Illinois, a suburb of Chicago. Mr. Elliott came into the office on Friday morning of this week and wanted to get a copy of AMERICAN ARTISAN. He was given a copy of November 23rd issue, the latest out at that time. He looked at it and said, "Oh, this is last week's. I want this week's." It seems Mr. Elliott got Thanksgiving Day mixed up with Sunday and thought Friday was Monday. I think it is quite a compliment to the ARTISAN when they can't wait until the paper is delivered but want to come down here to the office to get it. We surely were glad to see Mr. Elliott, but we had to disappoint him this time.



#### Efficiency

It seems that one of the employes of Henry Ford dreamed that Henry died. He dreamed that he saw the black casket being borne by six of Henry's oldest and most faithful employes. As the casket came by, Henry raised up, looked around, and offered the following suggestion:

"If you would put rollers under this casket, you could lay off five men."

"Sandy, I dinna like the way ye drive so close to the car ahead. An' it's night, too."

"Whisht ye, Woman. Dinna ye ken that I can turn off ma headlights that way an' save the battery?"

#### Correct

Economics Professor: "Name some production in which the supply exceeds the demand."

Stude: "Trouble."

Mandy: "You-all reminds me of one of them flying machines."

Rastus: "How cum, woman, how cum? Cause I is such a high flyer?"

Mandy: "No, sah, cullud man; it's jest 'cause you ain't no use on earth."



Young Lady (just operated on for appenditicis): "Oh, doctor will the scar show?"

Doctor: "Not if you are careful."

#### Fore!

"I call my girl a 'golf bug.'"

"For what ungodly reason?"

"It's her ambition to go around in as little as possible."

"I may not have a little fairy in my home or a little miss in my car," allowed the driver as he started home, "but I certainly have a little made in my cellar."

#### Directions

Pat: "Why are you wearing so many coats on such a hot day?"

Mike (carrying paint can): "I'm going to paint me fence, and it says on this can, 'To obtain best results, put on at least three coats,'"

When an automobile stops along the road in daylight, that's trouble. When it stops at night, it's romance.

#### \* \* \* One Price

Small Brother: "Ha, ha! I just saw you kiss Sis."

Suitor: "Here. Keep still. Put this quarter in your pocket."

S. B.: "Here's ten cents change. One price to all, that's the way I do business."

Country Maid: "Come outside, I want to show you my cute little calf."

City Salesman: "Eh—isn't there enough light in the room?"

#### \* \* \* Worm Drives

Mrs. Bloop: "Does your car have a worm drive?"

Mrs. Bleep: "Yes, but I tell him where to drive."

### Morale Good as Metal Markets Recede

Iron, Steel Industry Meeting Business Situation in Orderly Manner—Carriers
Still Best Buyers—Prices Being Reaffirmed

BUSINESS sentiment has been somewhat bolstered recently by the passing of panicky conditions on the stock market. Perhaps the most important after-effect has been the growing recognition that the stock market had cast a distorted shadow over industry.

Some important lines appear to be favorably placed, such as rail-road equipment, while building construction promises well. Meanwhile, President Hoover's program to stimulate work on public projects throughout the United States may have the effect of taking up some of the slack in unemployment which apparently is inevitable in a few industries over the next month or more. The only danger is that such propaganda, overdone, may make the situation appear more serious than actually is the case.

Of the major industries, the position of the automobile is the most acute because of its heavy overproduction this year. In an effort to cure this condition operations are being sharply cut, but, reduction notwithstanding, the year's total will fall little short of 5,600,000 cars and trucks. This will compare with the previous peak in 1928 of 4,600,-000 units.

Still confident that underlying business conditions are sound and that the aftermath of the stock market situation will largely be bridged in the next sixty days, the iron and steel industry is proceeding in orderly fashion, as though the current letdown were little more than seasonal.

Recent weeks have brought sharp reductions in production, sales and shipments of the sheet steel industry, according to the statistics of the National Association of Flat Rolled Steel Manufacturers.

Stocks show no increase. October production was at 95.3 per cent of capacity, compared with 97.7 per

cent in September and 103.5 per cent in October, 1928.

Sales of pig iron at Pittsburgh have dwindled to occasional carloads for filling in purposes, or to tide melters over the remainder of the year.

Shipments which were well maintained in recent weeks are declining and producers' order books are being steadily depleted.

Prices are unchanged, with current bookings insufficient to provide a test. Producers continue to quote \$18.50, base, valley, for No. 2 foundry and basic, and \$19 for bessemer and malleable.

Shipments of pig iron at Chicago are close to merchant production in this district, little headway being made in accumulating furnace stocks, although some iron is being piled.

Sales are mainly for spot delivery, but some tonnage is being placed quietly for first quarter and occasionally an inquiry appears in the open market.

Two small cargoes of boat iron, totaling about 4,000 tons, from an eastern lake furnace, were unloaded here in the past few days, and some of the iron was sold 50 cents under the Chicago market.

The Chicago furnace price is holding at \$20 for the base grades.

Spot orders for pig iron are numerous at Birmingham, but the tonnage is light.

Heavy shipments, however, are noted, much of the product going to competitive sections.

Quotations are firm at \$14.50, base, for local territory. Little business has been booked for first quarter. Consumption in the Birmingham district shows signs of improvement.

Trading activity in nonferrous metals has been light this week but prices generally have been steady.

Copper and aluminum continue at

prices that have ruled for many months, while lead and zinc are holding on the lower levels recently reached.

Shipments of metals have fallen off with smaller production of automobiles and radios.

Output of lead and zinc has been curtailed to meet the current situation, and there is talk that tin production will be cut.

Copper producers in the recent past have shown a tendency to adjust supplies quickly to demand, but there is little definite information on their present operations.

#### Copper

Light domestic business has been done at 18.00c, Connecticut, for early shipment, while export sales have picked up to a fair level.

A little copper appeared in the outside market lately at ½ cent under producers' prices but it seems to be well absorbed.

All indications point to steadiness of price through this year, with the price policy later depending on the business outlook.

#### Zinc

Prime western sales continue unusually quiet.

Most smelters still are asking 6.25c, East St. Louis, but metal has sold mostly about 5 points lower recently, and some is reported as low as 6.15c.

#### Tin

The rise in price has been so abrupt that users here have not had faith in it.

The result is that they have continued to hold off. Small buying of first quarter arrival has been done.

#### Lead

Buying has been moderately active lately, due to the fact that users of lead have not been so well covered as users of other metals.

Most of the business has been for December shipments. Prices are steady.

### Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN is the only publication containing Western Metal, Furnace Supply and Hardware prices corrected weekly

Note: These Prices Are Chicago Warehouse Prices of Metal, to Which Must Be Added Freight to Cities Outside of Chicago.

METALS	LEAD	Adams' Sheet Metal	PIRE POTS
BIG TROY	American Pig	7 inch, dos	Geo. W. Diener Mfg. Co. Ba.
PIG IRON Chicago Fdy.,	TIN	9 inch, doz	No. 02 Gasoline Torch, 1 qt 8 18
No. 2	Pig Tinper 100 lbs. 46 00	14 inch, doz 5 00	No. 9250, Kerosene, or Gasoline Torch, 1 qt 8 80
FIRST QUALITY BRIGHT	HARDWARE, SHEET	EAVES TROUGH	No. 10 Tinner's Furn. Square tank, 1 gal 11 30
CHARCOAL TIN PLATES	METAL SUPPLIES, WARM AIR FURNACE	Galv. Crimpedge, crated75-10% Zinc, "Barnes"	No. 15 Tinner's Furn. Round tank, 1 gal 10 to
X 20x25	FITTINGS AND ACCES-	ELBOWS	No. 21 Gas Soldering Fur- nace
		Conductor Pipe	No. 110 Automatic Gas Soldering Furnace 10 50
TERNE PLATES Per Box Per Box 10 20 22 40 b 112 sheets \$26 70	Paner up to 1/16 fc per lb	Galv. plain or corrugated, round flat Crimp.	
IC 20x28, 40-lb. 113 sheets \$26 70 IX 20x28, 40-lb. 113 sheets 29 70 IC 20x28, 25-lb. 112 sheets 22 20	Roll board	18 Gauge	GALVANIZED WARD Pails (Galv. after made),
IX 20x28, 25-lb. 112 sheets 35 30 IC 20x28, 20-lb. 112 sheets 30 35 IV 20x28, 20-lb. 112 sheets 33 00	Corragated Laber (200	16 Gauge	Tubs (Galv. after made).
"ARMCO" INGOT IRON PLATES	BRUSHAS	Galv. Terne Steel	No. 1 8 98
No. 8 ga.—100 lbs	Bristle with handle each \$0 75	Plain Rd. and Rd. Corr.:	No. 1 4 80
		16 Ga	GLASS Single Strength, A, all
Cokes, 80 lbs., base, 20x28 \$12 90 Cokes, 90 lbs., base, 20x28 12 30	American Seal, 5-lb, cans, net \$ 45	Square Corrugated	brackets85%
COKES PLATES Cokes, 80 lbs., base, 20x28 12 30 Cokes, 100 lbs., base, 20x28 12 30 Cokes, 107 lbs., base, 102 30x28 12 12 76 Cokes, 135 lbs., base, 1X 30x38 14 75 Cokes, 155 lbs., base, 2X, 56 sheets 55 Kokes, 176 lbs., base, 2X, 85 sheets 59 85 86	American Seal, 5-lb. cans, net \$ 45 American Seal, 10-lb. cans, net \$ 5 American Seal, 26-lb. cans, net 2 25	No. 28 Gauge	Single Strength, B, all brackets87%
Cokes, 135 lbs., base, IX 20x38	Pecoraper 100 lbs. 7 50 CHIMNEY TOPS	Portico Elbows	Double Strength, A, all brackets86%
56 sheers 8 50 Cokes, 175 lbs., buse 8X,	Adams' Revolving Wt. Doz. Price Dos. 4 in31 lbs311 00	Standard Gauge Conductor Pipe, plain or corrugated.	Double Strength, B, all brackets87%
Oweres, 146 lbs., base 4X.	7 ip	Not nested	HANGERS
METE ANNEALED SHEETS	8 in	Sq. Cerr., A. & B. & Octagon	Conductor Pipe
Base 10 gaper 100 lbs. \$3 35 "Armco" 10 gaper 100 lbs. 4 15 ONE PASS COLD ROLLED	10 in	28 Ga	Milcor Perfection Wire25% Milcor Triplex Wire10%
BLACK No. 18-26	CLINEER TONGS	Portice	Eaves Trough Milcor Steel (galv. after
Ma 99 NAP 100 IDE 4 UD	CLIPS Damper	1", 1%", 1%"45%	forming) from List50% Milcor Selflock E. T. Wire,
No. 24 per 100 lbs. 4 95 No. 26 per 100 lbs. 4 15 No. 27 per 100 lbs. 4 20 No. 28 per 100 lbs. 4 30 No. 28 per 100 lbs. 4 30	No-Rivet Steel, with tail pieces, per gross\$9 50	Copper	List10%
No. 29per 100 lbs. 4 55	pieces, per gross 7 50	16 oz., all designs48%	Conductor
"ARMCO" GALVANIZED  "Armco" 24per 100 lbs. \$6 15	Tail pieces, per gross 2 40 COPPERS—Soldering Pointed Roofing	All styles60%	"Direct Drive" Wrought Iron for wood or brick15%
GALVANIZED  No. 16per 100 lbs. \$4 40	8 lb. and heavierper lb. 40c 3% lbper lb. 46c	ELBOWS—Stove Pipe	
No. 18per 100 lbs. 4 00	1 lbper lb. 48c	1-piece Corrugated. Uniform Blue	HUMIDIFYAR
No. 20 per 100 lbs. 4 75 No. 22 per 100 lbs. 4 75 No. 24 per 100 lbs. 4 90 No. 26 per 100 lbs. 5 15 No. 27 per 100 lbs. 5 26 No. 27 per 100 lbs. 5 26	CORNICE BRAKES	"Milcor" No. 28 Gauge. Doz. 5-inch\$1 15	"Front-Rank," Automatic
No. 27 per 100 lbs. 5 25 No. 28 per 100 lbs. 5 40	Chicago Steel Bending Nos. 1 to 6BNet	8-inch	In lots of 10 or more50-5%
No. 30per 100 lbs. 5 80 BAR SOLDER	Gal., plain, round or cor. rd.	Special Corrugated	In lots of 25 or more50-10%
Warranted 50-50 per 100 lbs. \$29 00 48-52per 100 lbs. 28 00	26 gauge	6-inch	Vapor pans, etc., each50%
Plumbers per 100 lbs. 24 00	Yankee Hot Air	Adjustable—Uniform Blue "Milcor" No. 28 Gauge. Uniform	Stove Cover Copperedper gro. 86 66
In Slabs 7 85	7 Inch, doz	Blue.	Alaskaper gro. 4 78
In Slabs 3 7 35 SHEET ZINC Cask Lots (600 lbs.) 312 00 Sheet Lots 14 00	10 inch, doz	5-inch	MALLETS
BRASS	ADAMS No. 1 CHECK	WOOD FACES-60% off list.	Hickoryper des. \$2 38
Sheets, Chicago base24 % c	Check and Collar Complete	FENCE	MITERS
Tubing, brazed, Chicago base 31% c Mill base	9 inch, each 2 25 End Check Only 8 inch, each 1 60	736-6-1216 % (100 rods)\$28 68	Galvanized steel mitres
base	Collar Only	1948-6-14%% (100 rods) 48 63	28 Ga
Wire, Chicago base 24% c Mill base 23% c Rods, Chicago base 22% e	s inch, each	FILES AND BASPS	
Kods, Chicago base22 % c Mili base21 % c COPPER	No. 2 CHECK	Helier's (American)50-10% American60-10%	NAILS Cut Steel, base
Sheets, Chicago base27% c Mill base26% c	8 inch, sach	Arcade	Wire
Tubing, seamless, Chicago base30 4 c	Diamond Smoke Pipe 7 inch, dos	Eagle	Common Wire, L. C. L 3 28
Mill base	7 inch, doz	McClellan	(Continued on page 192)
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on a regular schedule but	does not appear in this issue.	
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Kester Solder Co		F
Ku-No Register Mfg. Co		E

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MarketsContin	ued from Page 191
PASTE	RIDGE ROLL
Asbestos Dry Paste:	Galv., Plain Ridge Roll,
200-lb. barrel	b'dld
50-lb. pail 4 25	Galv., Plain Ridge Roll
10-lb. bag	crated75-16
ays-ib. cartons	
PORERS, FURNACE	Sheet Metal
Bach	7. ½x¼. per gross 80 59
	No. 10, %x8/16, per gross 48
POKERS, STOVE	No. 14. %x%, per gross ##
Nickel Plated, cell handles,	
per doz	
per dos \$6 76	SHEARS, TINNERS'
PIPE	a MACHINISTS'
Conductor Cor. Rd., Plain Rd., or Sq.	Viking
	Lennox Throatless
Galvanized	No. 18
Crated and nested (aii gauges)	Shear blades10%
(all gauges)76-34%	(f. o. b Marshalltown, Iewa)
Furnace Pipe	
Double Wall Pipe and	SHIELDS, ADJUSTABLE
Fittings	RADIATOR
Galvanized and Tin Fit-	No. 1 "Gem" 11" to 17" 10%
tings50 & 10%	No 2 "Gem" 14" to 14" 10%
Lead	No. 8 "Gem" 25" to 65" 20%
Per 100 lbs\$12 50	
Stove Pipe	SHOES
"Milcor" "Titelock" Uniform Blue Stove	Gaiv. 28 Gauge, Plain or cor-
28 gauge, 5 inch U. C. nested	rugated round flat crimp
28 gauge, 6 inch U. C.	26 gauge round flat crimp 45%
28 gauge, 7 inch U. C.	34 gauge round flat crimp15%
nested	
20 gauge, 6 inch U. C.	SNIPS, TINNERS
nested	Clover Leaf 40 & 10%
T-Joint Made up	National40 & 10%
6 inch, 28 gaper 4os. \$ 8 40	Milcor
All Zine No. 11, all styles60%	
	SQUARES
PULLEYS	
Furnace Tackleper dos. \$0 85 per gro. 8 60 Furnace Screw (enameled)	Steel and Iron
rurnace Screw (enameled)	(Add for bluing \$3 per doz. net) MitreNet
	TryNet
PUTTY	Try and BevelNet
Commercial Putty, 100-lb.	Try and MitreNet
Kits	Fox'sper dox. \$6 06
	Winterbettom's10%
REDUCERS-Oval Stove Pipe	
Per Dos.	STOPPERS, FLUE
-6, 28-gauge, 1 doz. in carton	Commonper dos. \$1 10
	Gem, No. 1per dos. 1 10
BEGISTERS AND BORDERS	Gem, flat, No. 1per dos. 1 **
Baseboard, Floor and Wall	A STATE OF THE PARTY OF THE PAR
Cast Iron	VENTILATORS
saseboard, 2 piece33 1/2 %	Standard 30 to 40%
Saseboard, 1 plece 33 1/2-20 % saseboard, 2 plece 33 1/3 % Vall 32 1/3 % Ldjustable Ceiling Ventilators	
	WIRE
Register Faces—Cast and Steel apanned, Bronzed and	Black annealed wire, No. 9,
Plated, 4x6 to 14x1433 1/4% arge Register Faces—Cast,	per 100 lbs\$3 30
14x14 to 38x42	Galvanised barb wire, per
14x14 to 38x4360%	100 lbs \$ 30
entilating Register	Cattle Wire—galvanised catch weight spool, per 100 lbs. 3 30
Per gross 9 00	Calvanizad Plain Wire No.

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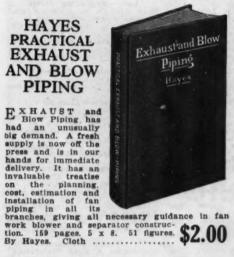
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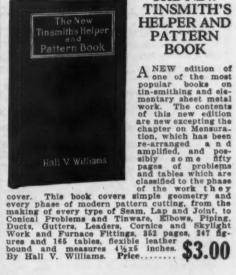
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Mt. Vernon Furnace & Mfg. Co., Mayor Formace Co., Columbus, Ohio Mt. Vernon Furnace & Mfg. Co., Mt. Vernon Furnace & Mfg. Co., Mt. Vernon Furnace & Mfg. Co., L. J., Mueller Furnace Co., L. J., Milwaukee, Wis. Premier Warm Air Heater Co., Dowagiac, Mich. Richardson & Boynton Co., New York, N. T. Robinson Co., A. H., Massillon, Ohio Standard Fdy. & Furnace Co., De Kalb. Ill. Success Heater Mfg. Co., Des Moines, Ia. XXth Century Heating & Ventilating Co., Minneapolis, Minn. Western Steel Products Co., Chicago, Ill. Canton, Ohio ting Co., cosse, Kan. City Wise Furnace Co., Akron, Ohio Glass—Wire.

Glass—Wire. Lupton's Sons Co., David, Philadelphia, Pa.

Philadelphia,

Grilles.

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Harrington & King Perforating
Co., Chicage, Ill.

Hart & Cooley Co., New Britain, Conn.
Independent Register & Mfg.,
Co., Cleveland, Ohio
Tuttle & Bailey Mfg. Co.,
Chicago, Ill.

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Tuttle & Bailey Mfg. Co.,
Chicago, Iil.

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o Mfg. Co., New York, N. Y.

Eller Mfg. Co., Canton, Ohio Lupton's Sons Co., David, Philadelphia, Pa. Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City H. M. Sheer Co., Quincy, Ill.

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Fox Furnace Co., Elyria, Ohio
Mt. Vernon Furnace & Mfg. Co.,
Mt. Vernon, Ili.
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Heaters—Domestic Hot Water.
Alamo Heater Co., Chicago. Ill.
Standard Fdy. & Furnace Ce.,
De Kaib, Ill.

Milwaukee Corrugating Co.,
Milwaukee, Wis.

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Meyer Furnace Co., The,
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The Mercoid Corp., Chicago, Ill.
Waterman-Waterbury Co.,
Minneapolis, Minn

Fort Shelby Hotel, Detroit, Mich.

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Mueller Furnace Co., L. J.,
Milwaukes, Wia.
Perfect Humidifier Co.,
Sheer Co.,
Sheer Co.,
Mich. H. M. Sheer Co., Quincy,
J. L. Skuttle Mfg. Co.,
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Sterling, Ill.

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Bertsch & Co.,
Cambridge City, Ind

Machinery—Culvert.

Bertsch & Co.,
Cambridge City, Ind

Machines—Tinsmith's.

Bertsch & Co.,
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Dreis & Krump Mfg. Co.,
Chicage, Ill.
Interstate Machinery Co.,
Chicage, Ill. La Salle Machine Works, Chicago, Ill. Maplewood Machinery Co., Chicago, Ill. Marshalltown Mfg. Co.,
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Osborn Co., The J. M. & L. A.,
Clevelans, Ohio
Ryerson & Son, Inc., Jos. T.,
Chgo., N. Y., St. L., Det., Cleve.
Hyro Mfg. Co., New York, N. Y.

Metals—Perforated.
Harrington & King Perforating
Co., Chicago, Ill.

Miters. Eller Mfg. Co., Canton, Ohie Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

Miters—Eaves Trough.
Barnes Metal Products Co.,
Chicago, Ill. Berger Bros. Co.,
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Eller Mfg. Co.,
Canton, Ohie
Lupton's Sons Co., David,
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Philadelphia, Pa. Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

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Nails—Lead Head. Deniston Co., Not Inc., Chicago, Ill.

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McIlvaine Burner Corp.,
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E. L. Miller Mfg. Co.,
Kansas City, Mc.

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Gerock Bros. Mfg. Co.,
St. Louis, Me Miller & Doing, Inc., Miller & Doing, Inc.,

Brooklyn, N. Y.

Milwaukee Corrugating Co.,

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Connors Paint Mfg. Co., Wm.,
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(Continued on page 196)

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Now we have gotten out a New Tin, but the best machine made plate ever produced, for those who want to pay less. This is known as

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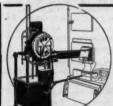
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(Continued from page 194)

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New York, N. Y.

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Ryerson & Son., Inc., Jos. T.,
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Forest City-Walworth Run
Foundries Co., Cleveland, Ohio
Hart & Cooley Co.,
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Henry Furnace & Fdy. Co.,
Cleveland, Ohio
Independent Register & Mig. Co.,
Cleveland, Ohio
Ku-No Register Mig. Co.,
Cleveland, Ohio
Ku-No Register Mig. Co.,
Bt. Louis, Mo.
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Meyer & Bro. Co., F., Peoria, Ill.
Milwaukee Corrugating Co.,
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Mueller Furnace Co., L. J.,
Milwaukee, Wis.
Rock Island Register Co.,
Rock Island, Ill.
Tuttle & Bailey Mig. Co.,
Chicago. Ill.

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Auer Register Co., Cleveland, Ohio
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-Heat. Chicago, Ill. H M Sheer Co..

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Bolls-Forming. Bertsch & Co., Cambridge City, Ind.

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Troy, N. Y.

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Roofing-Iron and Steel. Roofing—Iron and Steel.

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New Jersey Zinc Sales Co., The,
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Rubbish Burners.
Hart & Cooley Co.,
New Britain, Conn.

Schools—Sheet Metal Pattern Drafting. St. Louis Technical Institute, St. Louis, Mo.

Schools-Warm Air Heating. St. Louis Technical Institute, St. Louis, Mo.

Screws-Hardened Metallic Drive. Biller Mfg. Co., Canton, Ohio Milwaukee Corrugating Co., Mil., Ch'go. La Crosse, Kan. City Parker-Kaion Corp., 200 Varick St., New York

Screws—Hardened Self-Tapping, Sheet Metal. Eller Mfg. Co., Canton, Ohio Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City Parker-Kaion Corp., 200 Varick St., New York

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Ch'go, N. Y., St. L., Det., Cleve.
Viking Shear Co.,

Sheet Metal Nails. Deniston Co., Not Inc., Chicago, Ill.

Sheet Metal Screws-Hardened, Self-Tapping. Parker-Kalon Corp., 300 Varick St., New York

Sheets-Black and Galvanized. Armco Distributors Ass'n of America. Middletown, Ohio Central Alloy Steel Corp. Massillon, Ohio Eller Mfg. Co., Canton, Ohio Inland Steel Co., Chicago, Ill. Milwaykee Corrugating Co. Central Alloy

Eller Mfg. Co., Canton, Ohio
Inland Steel Co., Chicago, Ill.
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Osborn Co., The J. M. & L. A.,
Cleveland, Ohio
Rockford Sheet Steel Co.,
Rockford, Ill.
Ryerson & Son, Inc., Jos. T.,
Ch'go, N. Y., St. L., Det., Cleve.
Taylor Co., N. & G.,
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Armco Distributors Ass'n of
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Southington, Conn.
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Viking Shear Co.,
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Burgess Soldering Furnace Ce.,
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Sheet Steel Trade Extension Committee, Cleveland, Ohio

New Jersey Zinc Sales Co., The, New York, N. Y. Fanner Mfg. Co., Cleveland, Ohio

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Arex Company, Chicago, Ili.
Berger Bros. Co.,
Philadelphia, Pa.
Eiler Mfg. Co., Canton, Ohic
Kerachen Co., Chicago, Ili.
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Standard Ventilator Co.,
Lewisburg, Pa Ventilators

Ventilators Hart & Cooley Co.,

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Henry Furnace & Fdy. Co.,

Cleveland, Ohie

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Wood Faces -Warm Air. wood Faces—Warm Air,
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American Wood Register Co.,
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#### WANTS AND SALES

Yearly subscribers to the AMERICAN ARTISAN may insert advertisements of not more than fifty words in our Want and Sales Columns WITHOUT CHARGE for three insertions.

Such advertisements, however, must be limited to help or situation wanted, tools or equipment for sale, to exchange or to buy, business for sale or location desired and must reach our office by Thursday of the week of publication. This privilege is not extended to manufacturers or jobbers—or those making a business of buying and selling used machines—employment agencies and brokers.

When sending advertisement state whether your name or blind number is to be used.

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Lightning Rods—Dealers who are soliting Lightning Protection will make money by writing to us for our latest Factory to Dealer Prices. We employ no salesmen and save you all overhead charges. Our Pure Copper Cable and Fixtures are endorsed by the National Board of Fire Underwriters and hundreds of dealers. Write today for samples and prices. L. K. Diddle Company, Marshfield, Wis.

#### **BUSINESS CHANCES**

Wanted — An experienced sheet metal man to invest a little capital to act as shop foreman or estimator for a shop doing cornice, skylight, ventilating, blowpipe and general sheet metal work for a well equipped shop. Long established union shop. Address R-510, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

For Rent—Sheet metal, furnace and radiator shop in good South Dakota town of 3,000. Must be away from business for six months and will rent my shop very reasonably to reliable man. Must be good mechanic and have references. Address M-510, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

For Sale—Sheet metal and furnace business; well established; best location in St. Louis; doing nice business. Giving up on account of illness. Can be bought cheap. Apply R. H. Bohrer, 6187 Delmar Blvd., St. Louis, Mo.

For Sale—Well equipped and good paying auto radiator repair shop. Located on Main street, between two garages. Only shop in town of 4,000. Would like to sell by January 1, 1930. Cash or terms. Write Worthington Radiator Shop, Worthington, Minn. L-511

For Sale — Well equipped sheet metal and plumbing shop in one of the best and fastest growing towns in West Texas. For further information address W. L. Johnston, Ralls, Texas.

#### HELP WANTED

Wanted at once, active salesman for Union Sheet Metal Shop on Northwest side. Knowledge of furnace and factory repairs, also selling several specialties on straight commission basis. Address F-51, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

#### SITUATION WANTED

Executive who has had complete charge of sales, finance and installations for Chicago firm installing in excess of 700 furnaces annually is open for connection, due to contemplated closing of present business. Only interested in a proposition where real executive ability is wanted and will be properly compensated. Good business background and can bring two of the best furnace salesmen in the country with me. Not adverse to leaving Chicago. Address E-511, AMERICAN ARTISAN, 129 N. Clark St., Chicago, Ill.

Position wanted by high grade experi-

Position wanted by high grade experienced warm air furnace salesman. A-1 draftsman. Standard Code. Experienced in forced warm air heating. Can increase dealers business. Would consider a proposition from manufacturer or jobber for 1930. Well acquainted with trade in Central West. Address B-511, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

Wanted—At once, position with furnace manufacturer or sheet metal house. Well known to jobbing trade in the West. Also to dealer trade in Ohio, Michigan and Indiana. Al references. Address X-510, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

General tinner and roofer wants opening in a hardware store to open a tin shop and roofing and furnace business in a country town. Will go anywhere or work in an established hardware store as tinner. Address Anton Lambert, 9111 Clarion Ave., Detroit, Mich. C-511

Situation wanted by first-class tinner and furnace man. Capable of laying out and warm air heat engineering. Thirty-five years of age and of good clean habits. Write stating full particulars. AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

D-511

Situation wanted by tinner, furnace man and hardware clerk. Middle West pre-ferred, but will go anywhere. Address A-511, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

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#### The NEW METAL WORKER PATTERN BOOK

A Complete and Systematic Course of Instruction in Pattern Cutting as Applied to All Branches of Sheet Metal Work

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THIS work is the standard reference on all phases of pattern drafting and is recognized as the most practical and thorough text book on modern methods of developing and cutting patterns for sheet metal work. It covers

the principles underlying practically every problem that is likely to come up in daily practice. Beginning with the selection and use of drawing tools, the author explains linear and geometrical drawing so clearly that one who has had no previous knowladge of arithmetic or drawing row was also for the principles of the principles and the problem of the principles underlying practically every problem that is likely to come up in daily practically every problem that is likely to come up in daily practically every problem that is likely to come up in daily practically every problem that is likely to come up in daily practically every problem that is likely to come up in daily practically every problem that is likely to come up in daily practically every problem that is likely to come up in daily practically every problem that is likely to come up in daily practically every problem that is likely to come up in daily practically every problem that is likely to come up in daily practically every problem that is likely to come up in daily practically every problem that is likely to come up in daily practically every problem that is likely to come up in daily problem that one who has had no previous knowledge of arithmetic or drawing may under-stand these essentials and apply them. The most approved methods of pattern cutting are also given in the course of the work. As the book progresses the problems grad-ually become more advanced until the theory of triangulation is fully treated with many practical examples.

This volume does not presume upon any previous technical knowledge on the part of the beginner but aims to place before him all that is necessary to a thorough understanding of the work performed in the last chapter the practical problems which constitute the bulk of the book. No better text book for home study has ever been published.

The secret of success in sheet metal pattern cutting is in knowing how to apply the principles of geometry to your problems. Upon these underlying principles this book is written and ever since its publication it has been considered the standard authority on sheet metal pattern cutting and many affectionately term it "The Bible of the Trade."

This new edition has been carefully revised in order to keep it up to date and abreast of modern times and it will prove an infallible guide to everyone interested in sheet metal pattern drafting. Besides being a systematic treatise on pattern cutting it is also valuable as a reference book of pattern problems to be drawn from at convenience.

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A glance at the list of chapter and section headings will give a clear idea of the scope and ar- Enclosed find check (or rangement of money order) for \$6.00. Send me THE NEW METAL PATTERN BOOK.

A Monumental Work-No Shop Is Complete Without It

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Name .....

Chicago, Illinois Fown..... State......

#### SITUATION WANTED

Position wanted with a well advertised, reliable warm air furnace or sheet metal manufacturer as salesman, trouble chaser or heating engineer. 15 years' experience—7 years installing and 8 years in business for myself. Had a lot of experience in fan work. 32 years of age. Southern Michigan territory if possible, Will work on salary and commission basis. Address Box 185, Lansing, Mich. Y-510

Furnace salesman with 10 years' experience wants position as territory and retail salesman. Good reference. Iowa or Minnesota territory preferred, Can make change Dec. 15. Can sell both cast and steel furnaces and wish position with manufacturer. Living in Iowa with Iowa territory. Address M-511, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

Situation Wanted — By an all-around sheet metal and furnace man 34 years old and married. Would like to locate in a small town of ten to twenty-five thousand. Steady worker and have good habits. Address J-511, care of AMERICAN ARTISAN, 139 North Clark St., Chicago, Ill.

#### **MISCELLANEOUS**

Wanted—Information regarding whereabouts of a salesman by the name of Edward McCracken, familiarly known as "Mack." Operations the past few years confined mostly to warm air heating. Information will be held in strict confidence and can be mailed to the Homer Furnace Company, Coldwater, Mich., attention R. W. Strong.

For Sale—One Brillion Vacuum Cleaner. Has been used less than ten times. Guaranteed as good as new. First check for \$150.00 takes it. Address Lau Heating Co., 65 Fernwood Drive, Dayton, Ohio.

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Wanted—Heavy brake. Preferably a range brake that will work 10 ga. iron in eight to ten floor lengths. Hand operated. Address W-510, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

For Sale—One 18 gauge 8-inch Chicago steel brake. Price. \$90.00. Address T-510, AMERICAN ARTISAN, 139 N. Clark St., Chicago, Ill.

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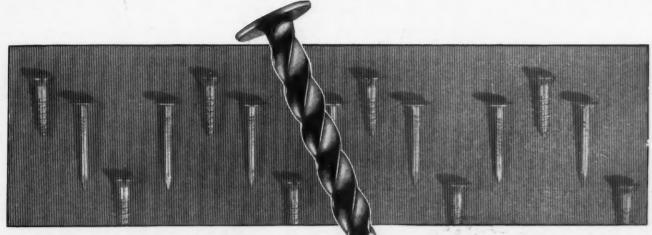
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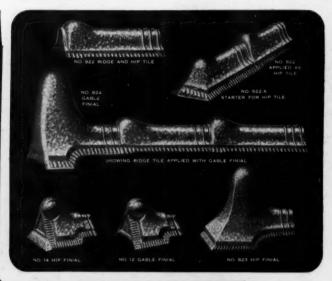
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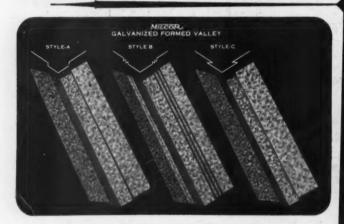
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